HERO SYSTEM
FIFTH EDITION

THE ULTIMATE SKILL



STEVEN S. LONG

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An Ultimate Book for the *HERO System*

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INTRODUCTION



Since the earliest days of the *HERO System,* the Skills have been one of the most important parts of the rulebook. Skills factor into every single genre — particularly the Heroic genres, where they may form the bulk of the characters' abilities. After all, one of the ways gamers and fans of adventure fiction tend to define "hero" is "a person of great skill and competence." Think about how many characters are described as being superb shots with a gun, the world's best cat burglar, tops in the field of demolitions/security/computers/whatever, and so on. All of those abilities are represented, in *HERO System* terms, with Skills.

Despite this, Skills have received relatively little attention in published products. The Hero genre books and a few other supplements have touched on the application of given Skills in specific situations or settings, but no book has talked about the subject of Skills in general.

The Ultimate Skill was written to make up for this lack. It examines the subject of Skills from numerous perspectives. It addresses Skills not only in general terms — as a major game element within the *HERO System* as a whole — but specifically, on a Skill-by-Skill basis, with new information and rules about every Skill (and several new optional Skills). As always, all the new and expanded rules in this book are strictly optional. Check with your GM before using them to create characters.

Chapter One, Skill Rules, provides general rules for Skills in the *HERO System.* It reviews all aspects of Skills — buying them, making Skill Rolls, Complementary and Extraordinary rolls, Skill Modifiers, and more — in detail, providing not only more information about them but expanded or variant rules for the GM's consideration.

Chapter Two, The Skills, contains the bulk of the book. It discusses the *HERO System* Skills one by one, providing detailed information about what characters can do with them, specific modifiers that apply to them, and how they work in various genres. After reviewing the existing Skills, Chapter Two provides several optional new Skills that players and GMs may want to use in their games.

Chapter Three, Skills And Equipment, covers the topic of how Skills apply to and are bought for/by equipment such as Vehicles, Bases, and Automatons. It includes a section on laboratories and some examples of equipment that improve a character's chances to use various Skills. (You can also find equipment pertaining to some Skills in those Skills' sections of Chapter Two.) **Chapter Four, Adventuring With Skills,** concludes the book with some information on how characters use Skills in combat and similar situations.

The text of *The Ultimate Skill* includes all the text from pages 42-77 of the *HERO System 5th Edition, Revised* rulebook. Usually the text has been expanded or rewritten to the point where it's effectively new, but in places where no further elaboration was necessary or desireable, the text is reprinted as-is so that all the information about Skills in the *HERO System* is in one easily-referenced volume.

chapter one:





SKILL RULES

BUYING SKILLS



Skills are abilities characters have learned or were trained to perform; in some cases, characters may be born with them. Examples of Skills include lockpicking, spaceship piloting, knowing all about politics, and fencing. While all characters possess basic knowledge of the world around them (they can speak their native language, do simple arithmetic, and so forth; see *Everyman Skills,* page 41), they do not all have the ability to pick locks or fire a gun. They must purchase such Skills with Character Points — the same Character Points used to buy Characteristics and Powers.

A character may obtain a Skill by paying the Character Point cost listed (usually 3 points). Once a character has bought a Skill, he may use that Skill over and over without paying any more Character Points. However, improving the character's ability in the Skill costs more points.

The *HERO System* groups Skills into five categories for ease of reference when creating characters. The categories are: Agility Skills (Skills based on DEX); Background Skills; Combat Skills; Intellect Skills (Skills based on INT); and Interaction Skills (Skills based on PRE). These categories are discussed further beginning on page 62. Characters may have Skills from any or all categories. Skill Enhancers (see page 46) lower the cost of certain Skills.

SKILL COST STRUCTURES

The *HERO System* has five cost structures for Skills.

Standard Characteristic-Based Skills

The most common is the standard Characteristic-based Skill model: for 3 Character points, you get a base roll of (9+(CHAR/5)) or less; +1 to the roll costs +2 Character Points.

Categorized Characteristic-Based Skills

Characters buy some types of Characteristic-based Skills, such as Forgery, Gambling, and Survival, by limited categories. These Skills cost 2 Character points for a base roll of (9+(CHAR/5)) or less with one category, or 1 Character Point for that roll with a specific subcategory; subsequent categories also cost 2 Character Points. Improving the roll by +1 with all categories costs +2 Character Points. Three Skills (Animal Handler, Navigation, and Weaponsmith) differ slightly — the first category costs 2 Character Points, and each subsequent category costs 1 Character Point.

Background Skills

Background Skills such as Knowledge Skill, Professional Skill, and Science Skill cost 2 Character Points for a base 11- roll. Characters can "upgrade" the base to a Characteristic Roll (typically an INT-Based roll) for +1 Character Point. Improving the roll by +1 costs +1 Character Point.

Weapon And Transport Familiarities

Weapon Familiarity and Transport Familiarity have a slightly different cost structure. The ability to use one subcategory (such as Blades or Camels) costs 1 Character Point. Knowing how to use an entire category of weapons or vehicles (such as Common Melee Weapons or Riding Animals) costs 2 Character Points... assuming characters are allowed to buy entire categories at once.

Set Cost Skills

Lastly, some Skills, such as Combat Skill Levels, Cramming, and Two-Weapon Fighting, have a set cost. These Skills typically don't have rolls.

SKILL COST CALCULATIONS

Most Skills consist of three components a character pays for: the base roll (9- in most cases); the bonus from the related Characteristic (typically CHAR/5); and the cost for increasing the roll (+1 to the roll for +2 Character Points for most Skills). By altering the cost and/or method of calculation for a Skill (or for Skills in general), you can make them more (or less) easy for characters to use, more (or less) common in the campaign, and so forth.

Changing Skill Costs

The existing Skill costs set forth in the standard rules are generally the best way to buy Skills, but not necessarily the *only* way. For some games the GM adjusts the cost structure to better represent the nature of the campaign setting, the GM's or players' preferences regarding Skill purchase and use, or other factors. (See also the discussion on page 12 of *Altering The Skill Roll,* including disconnecting Skill Rolls from Characteristics, and the sections on unifying and/or subdividing Skills in each Skill's description in Chapter Two.)

NO SUBDIVIDED SKILLS

One of the anomalies in the current Skills cost structure is the existence of several Characteristic-Based Skills that characters must purchase by category: Animal Handler, Fast Draw, Forgery, Gam-

ODDS ON 3D6

As you evaluate the various options for Skill costs and calculations, it may help you to consider the odds of rolling a certain number or less on 3d6:

Roll	Odds on 3d6
3	0.46%
4	1.85%
5	4.63%
6	9.26%
7	16.20%
8	25.93%
9	37.50%
10	50.00%
11	62.50%
12	74.07%
13	83.80%
14	90.74%
15	95.37%
16	98.15%
17	99.54%
18	100.00%

In the *HERO System,* a roll of 3 always succeeds, and a roll of 18 always fails, unless the GM rules otherwise, or a specific rule indicates a different result. See also the *Modifier Effects* table on page 32.

bling, Navigation, Survival, and Weaponsmith. This represents a trade-off between "realism"/logic (for example, "Why should someone who knows how to survive in the arctic have any inkling about how to survive in the Sahara?") and the general "dramatic action" focus of the *HERO System.*

For games that want to emphasize dramatic action or de-emphasize precise Skill use, this sort of "subdivision" of Skills may be unnecessary. In that case, the GM can simply rule that all those Skills are ordinary Characteristic-Based Skills, giving a character who buys them full access to all listed "categories" for the standard base cost of 3 Character Points.

ALL SUBDIVIDED SKILLS

Conversely, in campaigns that want to emphasize "realism" and heighten the distinctions between Skill-based characters, GMs may want to subdivide more Characteristic-Based Skills, if not *all* of them, so that they're bought and used like Gambling, Navigation, or Survival. Alternately, some GMs may find it worthwhile to split a single broad Skill into two or more Skills; for example, a GM could divide Security Systems into two Skills, *Find Traps* and *Disarm Traps.* The individual Skill descriptions in Chapter Two provide suggestions for "categorizing" or "splitting" most Skills.

NORMAL SKILL MAXIMA

In some campaigns GMs confront the problem of "Skill inflation" — of characters buying high Skill Rolls so that they rarely fail, thus skewing the game and making it difficult to "realistically" challenge them. To avoid or diminish this problem, some GMs use *Normal Skill Maxima* rules.

Similar to Normal Characteristic Maxima, the Normal Skill Maxima places an upper limit on the level of ability a character can have with a Skill. The GM sets the upper limit; in most campaigns it's 13-. To raise a Skill Roll above the limit requires twice as many points as normal (and GM approval). For example, suppose Desdimona, an elegant and well-spoken chatelaine from a noble family, wants to raise her Conversation from 13- to 14-. This costs 4 points, rather than the normal 2.

If a character has a Characteristic that's so high that he acquires a roll of 14- or higher by paying the standard Skill Cost, the cost of the Skill remains unchanged. However, if he wants to improve the Skill Roll, the Normal Skill Maxima rule applies.

Skill Levels

Since they would provide an inexpensive work-around for Normal Skill Maxima, characters in a campaign that uses Normal Skill Maxima may not buy Skill Levels unless the GM specifically permits them (which he rarely should). The exception is equipment that provides Skill Levels, such as a set of finely crafted lockpicking tools (+2 to Lockpicking rolls with the *Focus* Limitation).

Penalty Skill Levels

In the absence of Skill Levels, and with the increased cost of raising a Skill above 13-, Penalty Skill Levels become an important way for a character to improve his ability with a Skill (assuming the GM uses the optional rule that allows characters to buy PSLs to counteract negative Skill Modifiers). They allow a character to learn how to use a Skill in certain situations that ordinarily hinder people. (See page 248 for more information.)

Spending Experience Points

During the course of a campaign, a player may spend Experience Points on one of his Characteristics and as a result increase his Skill Roll. In this case, Normal Skill Maxima still applies, and the player must spend twice as many points to raise the Skill above 13-. Points previously spent on the Skill are not lost; they simply don't raise the roll until the total points spent raises it as per the rules above.

Example: *Sylarin has DEX 17 and Lockpicking 13- — he spent 3 Character Points on Lockpicking, and another +2 points to increase the roll by 1, to 13-. After a few adventures, he spends 3 Experience Points to increase his DEX to 18. That's enough to increase his base DEX Roll to 13-, and his base Lockpicking roll to 13- as well. Since his base roll is now at the Normal Skill Maxima, the +2 Character Points previously spent to increase his Lockpicking roll now have no effect — he still only has a 13- roll with Lockpicking. To raise it to 14-, he'll have to spend another +2 points (for a total of 4 points), per the Normal Skill Maxima rules.*

Increasing Skill Difficulty

You can also apply Normal Skill Maxima rules, or something like them, to make it harder for characters to learn Skills with high rolls, reflecting the fact that acquiring basic knowledge of a Skill is fairly easy, but the more advanced one's study becomes the harder picking up new abilities can get. For example, maybe buying a Skill to 13- or less has the normal cost. Paying to increase the roll to 14- or 15- costs 3 Character Points per +1; increasing it to 16- or 17- costs 4 Character Points per +1; and any increase beyond 17- costs 5 Character Points per +1.

SKILL COSTS BY GENRE

In some cases, the GM may want to alter the cost of Skills according to the genre or setting of the campaign. In other words, he makes some Skills (the ones most appropriate or relevant to the genre/setting) cheaper so characters are more likely to buy them, and makes inappropriate Skills more expensive to discourage characters from purchasing them. In some ways you can think of this as a Package Deal or Skill Enhancer that provides a savings for buying genre-/setting-appropriate Skills. For example, in a *Dark Champions* game where the GM wants to encourage a lot of fast-paced gunplay, he might reduce the cost of Autofire Skills, Fast Draw, Rapid Attack, and Two-Weapon Fighting.

Alternately, if the GM thinks that some Skills are unusually useful in a particular genre or setting, he might want to *increase* the cost of those Skills to balance out their effectiveness. This could involve a direct cost increase (such as "all Combat Skills cost double"), or it could mean imposing a Normal Skill Maxima (see above) on certain



SKILL COMBINATIONS

Name	Skills
Actor	Acting, Disguise, Mimicry
Animal Trainer	Animal Handler (7 points' worth), Riding
Athletics	Acrobatics, Breakfall, Climbing
Cat Burglar	Climbing, Lockpicking, Security Systems
Commander	Oratory, Tactics, WF (4 points' worth) (add Riding in Fantasy and other appropriate genres)
Con Artist	Conversation, High Society, Persuasion, Seduction
Crime	Bribery, Forgery (3 points' worth), Gambling (3 points' worth), Streetwise
Detective Work	Criminology, Deduction, Forensic Medicine, Interrogation
Dilettante	Gambling (3 points' worth), High Society, Knowledge Skills (6 points' worth)
Doctor	Paramedics, SS: Medicine (INT Roll), SS: Surgery (INT Roll)
Electronics Wiz	Computer Programming, Electronics, Inventor, Systems Operation
Finesse	Climbing, Contortionist, Sleight Of Hand
Grease Monkey	Inventor, Mechanics
Gunfighter	Fast Draw, Two-Weapon Fighting (Ranged), WF (Small Arms)
Hacker	Computer Programming, Cryptography, Electronics, Systems Operation
Hunter	Navigation (Land), Stealth, Survival (2 points' worth), WF (2 points' worth)
Infiltration	Lockpicking, Security Systems, Stealth
Pilot	Combat Piloting, Navigation (Air), Systems Operation, TF (5 points' worth of Air Vehicles)
Politician	Bureaucratics, Oratory, Persuasion
Sage	20 points' worth of Knowledge Skills lumped into one Skill with an appropriate title (for example, a character with an extensive knowledge of history might buy Sage and change the name to *Historian*).
Sailor	Navigation (Sea), TF (10 points' worth — all the watercraft)
Scientific Genius	20 points' worth of Science Skills lumped into one Skill with an appropriate title (for example, a character with an extensive knowledge of the biological sciences might buy Scientific Genius and change the name to *Biologist* or *Biology Genius*).
Spy	Cryptography, Lockpicking, Security Systems, TF (2 points' worth), WF (2 points' worth)
Surveillance	Bugging, Concealment, Shadowing
Wheelman	Combat Driving, Navigation (Land), Shadowing (only in vehicles), TF (7 points' worth — all of the Motorized Ground Vehicles)

Skills. In this case, less useful or effective Skills might also become cheaper. For example, in a Fantasy campaign where the characters mostly sneak around in underground caverns killing monsters and taking their treasure, the GM might make combat-, magic-, and stealth-oriented Skills cost more, but reduce the cost of the much-less-often-used social and artistic Skills.

COMBINING SKILLS

In games where Skills aren't an important element of play, or where the GM wants to simplify the options players have to learn to create a character, you can consider combining two or more Skills into one single Skill (a "meta-Skill," if you will). These are called *Skill Combinations.* In some ways you can think of them as similar to a Package Deal, since they typically relate to a specific profession, pursuit, or activity.

The accompanying table includes some suggested Skill Combinations, but many others are certainly possible. Some of them indicate that a character must pick a certain number of points' worth of something (such as Weapon Familiarities or Knowledge Skills). The character must make these choices when he takes the Skill, and they indicate the limits of his knowledge or abilities within the Skill Combination.

Some Skills appear in more than one combination. If a character buys two or more Skill Combinations containing the same Skill, that doesn't change the price of the Skills or improve his roll with that Skill.

In some cases the GM may want to include X points' worth of Background Skills (typically KSs and PSs) with *every* Skill Combination to represent the broad and detailed knowledge a Skill Combination tends to represent. For example, a character with the *Actor* Skill Combination would have KSs and PSs related to show business and the craft of acting — who's who in Hollywood, how to behave at an audition (and where to find audition listings), basic set design and construction skills, and so forth.

The GM has to determine the cost of Skill Combinations in his game. One possibility is to make the cost equal the cost of the Skills bought separately, but that may not simplify things very much if simplicity is your goal. The other possibility is to establish flat costs — either one flat cost for any Skill Combination (such as 5 Character Points or 10 Character Points), or two or more flat costs (so the GM can group Skill Combinations and make the more useful ones more expensive). The Skill Combinations in the accompanying table are arranged so that they typically have 9-12 points' worth of Skills; the easiest thing to do in a campaign is charge 10 Character Points each for them.

The GM must also decide what it costs to improve a Skill Roll with a Skill Combination. Usually this depends on the base price of the Combination — the cost to improve the roll is approximately half of the base cost. For example, if the base cost is 10 Character Points, improving the roll typically costs 5 Character Points; if the base cost is 5 points, improving the roll usually costs 3 points. But the final decision is up to the GM. The Skill Combinations in the accompanying table cost 5 Character Points for each +1 to the roll.

In some cases, the GM may want to vary Skill Combination packages by genre. For example, as noted in the table, the *Commander* Skill Combination should have Riding in *Fantasy Hero* games.

COMBINING SKILLS VIA SKILL ENHANCERS

Rather than reworking the Skill system to create Skill Combinations, the GM can accomplish the same end by devising appropriate new Skill Enhancers. Each Skill Enhancer would be like the *Expert* Skill Enhancer described on page 47, but characters could use them to buy Skills other than Background Skills.

The Skill Combinations Table provides you with a good list of Skill Enhancer names you can use. For example, the GM could create a Skill Enhancer called *Con Artist.* Characters could use it to buy any of the following Skills: Conversation, High Society, Persuasion, Seduction, and any Background Skills related to being a con artist, grifter, scam operator, or the like. The character would receive a -1 point cost reduction for each Skill bought through Con Artist. Similarly, an *Infiltration* Skill Enhancer would save 1 point on each Skill bought from this list: Lockpicking, Security Systems, Stealth, and any Background Skill related to breaking and entering.

COMBINING SKILLS VIA PROFESSIONAL SKILLS

Another way to achieve the Skill Combination effect without making any changes to the rules is to rely heavily on Professional Skills. Instead of spending a lot of points on Cryptography, Forgery, Lockpicking, Security Systems, and other espionage-related Skills, a character could simply buy *PS: Spy* with an extremely high roll — at least 20-, and quite possibly more. Then you use the Extraordinary Skill Rolls rules to govern any use of the Skill. Even though the character probably suffers significant penalties for using such a broad PS for some of the precision work normally done with Skills like Lockpicking, with such a high roll the odds are the character will often make the roll, and to spare.

SKILL PREREQUISITES

With a few exceptions (such as Inventor, which only works in conjunction with some other Technological Skill), the *HERO System* doesn't require characters to buy any particular ability before buying a Skill. There's no rule that says, for example, that "only characters with INT 15 or higher can buy Demolitions" or "to buy Computer Programming, a character must first have Electronics with at least a 13- roll." However, there's no reason a GM couldn't create "Skill Prerequisite" rules for his own campaign if he wants to. For example, in a world with computers similar to those of early twenty-first century Earth, but where literacy is far less common, the GM might rule that characters cannot buy Computer Programming until they buy Literacy in at least one language.

SKILL PERIOD

The GM should decide which Skills characters in his campaign can buy. Not all Skills are appropriate for all genres (genre books published by Hero Games provide suggestions regarding Skill availability). For example, characters in most Fantasy campaigns can't learn Computer Programming; that Skill depends upon modern electronics and other technologies not available in pre-industrial or early industrial settings. The GM can also alter the names of Skills to match the campaign. For instance, in a Fantasy campaign Paramedics becomes *Healing* (or *Chirurgy*) and High Society becomes *Courtier.*

The Skill Table on page 69 assigns all Skills to one or more of three time periods: Fantasy, Modern, or Future. "Fantasy" includes most pre-industrial societies, such as found in the typical Fantasy campaign. They usually involve little or no use of technology, and often little or no understanding of basic principles or science behind the Skill (if any).

"Modern" signifies Skills appropriate for campaigns set circa the years 1850-2020 on Earth. In many respects, the Modern period also includes near-future times, and even some prior industrial periods (such as the early Western/Victorian era). On the other hand, sometimes the wild and unexplored regions of the world are more like the Fantasy period, even in the twentieth and twenty-first centuries.

"Future" includes far-future settings such as those featured in most Science Fiction campaigns. Depending on the nature of the campaign, a Cyberpunk game may be "Modern" or "Science Fiction."

These periods serve as guidelines for which Skills are appropriate for which types of campaigns. The GM may alter the list, create more complex period lists, or allow exemptions for specific characters based on conception. For example, a time-traveling wizard from a Fantasy campaign might learn Electronics, or a Science Fiction campaign featuring lots of strange alien creatures might use Riding.

See the *Skill Period* section under *Skill Modifiers,* page 34, for information on how period/genre can modify Skill Rolls.

Varying Capabilities By Skill Period

Gamemasters should remember that Skill capabilities vary from period to period and genre to genre. For example, characters from any time period can purchase Criminology, but not until the early Modern period can they take advantage of fingerprinting techniques. A Babylonian priest and a twenty-first century physician might both have Paramedics, but the modern doctor has a lot more knowledge, medical techniques, medicines, and medical equipment available to him than the priest (even if the priest's roll is much higher).

As a rough guideline, the GM can assume that a Modern-era Skill provides a character with a minimum of twice as much knowledge and ability as a Fantasy-era Skill (assuming they have roughly the same Skill Rolls), and a Future-era Skill a minimum of twice as much knowledge and ability as a Modern-era Skill. This doesn't necessarily have any game effect (other than, perhaps, the Skill Modifiers discussed on page 34), but it provides a convenient yardstick for comparing characters. Genre books from Hero Games, and where appropriate the "Genre By Genre" sections of the Skill descriptions in Chapter Two, discuss Skill applications appropriate for specific periods and genres.

Expanded Skill Periods

If you want greater "realism" or precision in your campaign, you can expand the Skill periods from the three broad and basic ones described above to the ten discussed on page 34. In that case, the GM should adjust the Skill List as appropriate, though typically Age Of Reason/Piracy/Sail falls into "Fantasy," and Western/Victorian and Pulp into "Modern."

SKILL ROLL



The *HERO System* rates most Skills with a number that indicates how well the character knows it — the higher the number, the better he is at the Skill. In general, a character with an 11- is fairly good at a Skill, while any Skill over 14- is remarkable. See the Skill Roll Table for general information about what level of competence each Skill Roll indicates (though of course this may vary from campaign to campaign; check with your GM to learn more).

To use a Skill successfully, a character must roll less than or equal to his Skill Roll on three six-sided dice (3d6). If the roll exceeds his Skill Roll, he has failed. Sometimes the GM applies *Skill Modifiers* (see page 31) that increase or decrease a character's chances to succeed with a Skill Roll. All Skill Modifiers change the number the character needs to roll, not the dice roll itself (thus, a positive modifier, like +2, is good because it increases a character's Skill Roll; a negative modifier, like -3, is bad because it reduces the roll). This also applies to the character's Skill Levels and any Complementary Skills.

WHEN NOT TO ROLL

In ordinary situations, when a character's under no stress or pressure and has sufficient time to perform a task correctly, he doesn't have to make a Skill Roll (or Perception Roll) — the GM can assume success for ease of game play. The same applies to any situation where the facts involved are so commonly known, the knowledge required so basic, or the task being performed so elementary that it strains believability to think that someone could know the Skill but not know that fact or be able to perform that task easily. Characters must make Skill Rolls whenever they attempt to use a Skill in difficult or dangerous situations, when under pressure, when success is crucial or unlikely, when in combat, or the like.

In short: Skill Rolls are a part of the game to add dramatic tension and fun, not in defiance of common sense and dramatic sense. The GM shouldn't bother to have a character make a roll unless there's a good reason why the character should — why his success or failure might be in doubt and might significantly impact the events of the story being created.

TIME REQUIRED TO ROLL

Typically, making a Skill Roll constitutes a Half Phase Action, but this can vary depending on the Skill used, the task attempted, and the circumstances. Sometimes making a Skill Roll requires hours of effort or no time at all. The *Base Times* section under each Skill's writeup in Chapter Two provides more information about how long it takes to perform specific tasks (or types of tasks) using that Skill; see also page 35.

STANDARD SKILL ROLLS

The base Skill Roll for most Intellect, Agility, or Interaction Skills (also called *Characteristic-Based* Skills), and some Background Skills, is calculated by the following formula:

Base Skill Roll = 9 + (Characteristic/5) or less

Thus, the base Skill Roll for an Intellect Skill is 9 + (INT/5) or less (standard rounding rules apply). Most Background Skills have a base 11- roll.

Improving the Skill Roll for standard Characteristic-Based Skills costs +2 Character Points for each +1 to the roll. Background and Combat Skills, and a few special Skills, have different costs, explained in their individual descriptions. Characters may apply Limitations to these straightforward improvements to individual Skill Rolls, unless the GM rules otherwise. For example, a sneaky wilderness scout might buy +4 to his Stealth roll with the -½ Limitation *Only In Wilderness Environments.*

Characters can also improve Skill Rolls by purchasing Skill Levels. Every Skill Level adds +1 to the base roll of the Skills it applies to. The cost of a Skill Level depends on the number of different Skills to which it applies (see *Skill Levels,* page 301).

SKILL ROLLS BASED ON ALTERNATE CHARACTERISTICS

When characters use Characteristic-Based Skills, sometimes the GM will want them to make a Skill Roll based on an alternate Characteristic because of the way they're employing the Skill. This most often occurs when characters use technology-oriented Skills (which are usually based on INT but involve the use of the hands), or when they need to remember some fact pertaining to a Skill not based on INT. For example:

■ A character has Demolitions and wants to disarm a bomb. Given the way the GM described the bomb, the disarming procedure involves cutting two difficult-to-reach wires... and failure may trigger the explosion! The GM decides the character must make his Demolitions roll based on DEX, not INT.

■ A character has Security Systems and needs to bypass an alarm. This requires some split-second timing to splice two wires together while the alarm system cycles through a two-second "rest period." The GM rules that to do the job, the character has to make his Security Systems roll based on DEX, not INT.

SKILLS AND ENDURANCE

Skills do not ordinarily cost END to use. However, "realistically" some of them, such as Climbing, could be considered tiring activities. Therefore GMs running "realistic" campaigns may choose to charge characters END for them. Typically this means END for the STR used (perhaps with some minimum cost, such as 2 END per Phase, and subject to the usual rule that a character only pays END once per Phase for all his uses of STR).

Even if the GM charges END for some Skills, characters cannot Push them.

SKILL ROLL TABLE

Characteristic Value	Skill Roll	Description
N/A	8-	A *Familiarity* — very basic knowledge. See page 12 regarding Familiarities.
2 or less	9-	
3, 4, 5, 6, 7	10-	
8, 9, 10, 11, 12	11-	*Competent:* The character can perform routine tasks easily, and difficult tasks with a little effort. He's qualified to get a job using the Skill.
13, 14, 15, 16, 17	12-	*Skilled:* The character is well-versed in the Skill; he can perform even difficult tasks without too much effort. He's qualified to manage or assist less-skilled workers as they use the Skill.
18, 19, 20, 21, 22	13-	
23, 24, 25, 26, 27	14-	*Very Skilled:* The character is a master with the Skill. He can perform more difficult or unusual tasks without too much trouble.
28, 29, 30, 31, 32	15-	
33, 34, 35, 36, 37	16-	*Highly Skilled:* The character is one of the very best people in the world with that Skill. He often works on cutting-edge applications of the Skill.
38, 39, 40, 41, 42	17-	
43, 44, 45, 46, 47	18-	*Extremely Skilled:* The character is one of the greatest masters of the Skill in history. He develops new uses for the Skill and "pushes the envelope" of what it can do.
48, 49, 50, 51, 52	19-	
53, 54, 55, 56, 57	20-	*Incredibly Skilled:* The character amazes even other skilled practitioners. He's perhaps the greatest master of the Skill in history.

...and so on.

Characters can also improve a Skill Roll by paying more Character Points for the Skill, as listed in the text. Having a high Characteristic isn't the only way to get a high Skill roll.

■ A character with Acrobatics needs to remember the name of a famous acrobat. The GM rules that he has to make his Acrobatics roll based on INT, not DEX.

Even when the GM requires a character to use an alternate Characteristic to make a Skill Roll, a character may still apply any bonuses or Skill Levels bought to affect that Skill. This includes Skill Levels with "all Skills based on a particular Characteristic" when the "particular Characteristic" is either the one normally used for the Skill or the alternate one. For instance, in the Demolitions example above, if the character had bought a 3-point Skill Level with Bugging, Computer Programming, and Demolitions, he could apply it to his roll. He could also apply a Skill Level with All Intellect Skills (since Demolitions is ordinarily an Intellect Skill) or with All Agility Skills (since the GM's currently requiring him to make his roll based on DEX). However, if a character has 5-point Skill Levels with both categories of Skill (the one the Skill normally belongs to and the one he's currently using it as) he may *not* apply both — he has to decide which one to apply.

FAMILIARITIES

As noted on the Skill Roll Table, a character may buy a *Familiarity* with any Characteristic-Based, Knowledge, Science, or Professional Skill. Familiarity with a Skill costs 1 Character Point and gives the character a basic knowledge of the ability described. The Skill Roll is an 8- for any Skill with which the character has a Familiarity, whether or not the Skill is Characteristic-Based. (In other words, the character has an 8- roll with the Skill; his Characteristics do not modify this.)

For Skills like Animal Handler, Forgery, Gambling, Navigation, and Survival, which cost 2 points for a Characteristic-based roll with a category and have 1-point subcategories of those categories, a character who pays for a Familiarity may choose to be Familiar with either a 2-point category or a 1-point subcategory. However, to preserve game balance, the GM should forbid characters to purchase multiple Familiarities with the same Skill, again and again, to obtain two or more 2-point categories for 1 point each.

No Skill Levels (not even Overall Skill Levels) add to the 8- chance to perform a Skill a character's Familiar with, since the character doesn't understand the Skill well enough to use his expertise. However, Skill Modifiers may apply to make using a Familiarity easier (or more difficult). For example, taking several Turns should make being stealthy an easier task. A Familiarity can serve as a Complementary Skill (see below).

The 1 point spent for the Familiarity counts toward the cost of the Skill if the character later buys the full 3-point Skill. Thus, if Andarra buys Familiarity with Contortionist for 1 point and later decides to buy Contortionist, which costs 3 points, she need only spend 2 additional Character Points.

If a character buys a Familiarity with a Skill on a Focus, he gets the normal 8- Familiarity roll, not the standard 9- roll for a Skill on a Focus.

See below regarding expanding the concept of Familiarities.

Altering The Skill Roll

One way to change how Skills impact your game is to alter the Skill Roll characters obtain by buying a Skill.

ALTERING THE BASE ROLL

The base roll — 9- for Characteristic-Based Skills — is the foundation upon which most Skills are built. If the cost of the Skill remains constant, increasing the base roll makes Skills more powerful and easy for characters to use, while decreasing it makes Skills weaker and more difficult for characters to use. On the other hand, a change that's matched by a corresponding change in Character Point cost — or balanced by changes in the Characteristic bonus or cost of increasing the roll — may result in no significant net effect in most cases.

For example, suppose you change Skills in your game so that the base roll is 8- — or even 7-. Unless you also make them cheaper in some way, or alter the Characteristic bonus, Skills just got harder for characters to use. The odds of succeeding with a typical Skill Roll drop considerably, and characters who want to depend primarily on their Skills have to allot more points for buying increases to the roll.

On the other hand, suppose you increase the base roll to 10- or 11-. Suddenly characters are likely to have a much easier time succeeding with Skill rolls — the typical Skill starts out in the 12- to

14- range (or 13- to 15- for a base 11-), rather than 11- to 13- as with the standard rules.

If you increase the base roll, you may want to consider allowing characters to buy the base roll sort of like a Familiarity with an ordinary Skill: for a flat, relatively cheap cost, a character can buy a base roll with the Skill that he cannot increase with Skill Levels or the like.

The Cost Of A Base Roll

Instead of changing the base roll, the GM might instead want to consider changing what Skills cost. For example, instead of charging 3 Character Points for a Characteristic-Based roll, the GM might charge 2 points. For purposes of game balance, that typically has about the same effect as increasing the base roll — the character gets more effectiveness for his points. On the other hand, increasing the cost to 4 or 5 Character Points reduces the number of Skills characters can afford to buy.

ALTERING THE CHARACTERISTIC BONUS

The standard Characteristic bonus — the Characteristic divided by 5, or CHAR/5 — is a fundamental part of the *HERO System;* it factors into Characteristic Rolls, Perception Rolls, and various other rules in addition to Skill Rolls. Therefore, you should consider the implications carefully before deciding to change it (particularly if you don't alter some other aspect of the Skill, or change the cost, to compensate). For example, if you change the calculation for Skills, should you also change it for Characteristic Rolls and PER Rolls? Do you need to alter the value of the *Requires A Skill Roll* Limitation?

The smaller you make the divisor used to determine the bonus, the more powerful and relatively cheap you make Skills. For example, CHAR/4 or CHAR/3 tend to give characters higher Skill Rolls than the standard CHAR/5, making them better at their Skills and thus more likely to accomplish their goals when using them. Conversely, changing the bonus calculation to CHAR/6, or CHAR/8, or even CHAR/10 puts greater emphasis on the base roll and makes it harder for characters to succeed when using Skills.

One benefit to changing the Characteristic bonus calculation is that it can serve as a way to steer players away from buying Characteristics just in values that end in 3 and 8 (*i.e.,* 13, 15, 18, 23, and so on). A calculation of CHAR/4 or CHAR/3 suddenly makes Primary Characteristic totals like 12, 14, and 17 interesting choices for players concerned with "points efficiency."

Changing the way the Characteristic bonus is calculated may not work well in Superheroic games. In Heroic campaigns, where Primary Characteristics usually stay in the 10-20 range (only rarely getting as high as 25), it's easy to determine the effects of a different calculation. In Superheroic games, where Primary Characteristics can easily reach 30 or more, alternate Skill Roll calculations may cause game balance problems by making Skill Rolls rise too quickly.



No Characteristic-Based Skills

In some campaigns the GM may want to separate all Skills from Characteristics entirely. In this case, for the existing Characteristic-Based Skills, a character buys a flat 11- roll for 3 Character Points, and can increase the roll from that point for the standard cost of +2 Character Points for each +1 to the roll.

While the standard Characteristic-Based Skill rules work well for simulating dramatic action in most genres and settings, for some campaigns they don't function as effectively. In a more "realistic" game, the relationship between Characteristics and Skills may come into question. Just because a character's more agile and dexterous shouldn't *necessarily* make him any better at piloting, picking locks, or moving stealthily — those abilities depend primarily on *training,* not inherent aptitude. Thus, a character's devotion to learning and perfecting a Skill (in game terms, how many Character Points he's willing to spend on a Skill) is the only thing that dictates his level of ability.

Making this change has several implications for your game. First, it means characters have to pay more Character Points to get the same Skill Rolls they'd have under the standard rules, which means a greater percentage of their overall Character Point allotment may go to Skills. Second, since Characteristics now have no impact on Skills, characters may spend fewer points on them (perhaps putting the saved points directly into Skills), or buy them in amounts that don't divide favorably by 5. Third, characters may spend more points on Skill Levels, particularly those for given categories of Skills (which you can still use as convenient organizational tools even if the Skills in a category are no longer based on the same Characteristic). Fourth, if characters don't spend the points to obtain the same Skill Rolls they'd have under the standard rules, they'll be less competent, and thus more likely to fail Skill Rolls during adventures. This may impact everyone's enjoyment of the game.

All Characteristic-Based Skills

On the other hand, some GMs might want to base *all* (or nearly all) Skills on some sort of Characteristic Roll. This may involve making some changes to the way those Skills work. See the individual Skill descriptions in Chapter Two for some suggestions.

ALTERING THE ROLL INCREASE

Most Characteristic-Based Skills cost +2 Character Points for each +1 to the Skill (Background Skills cost +1 point per +1 to the roll). A change to this calculation can serve to balance a change made to the other factors.

To make Skills easier for characters to use successfully, you could make Characteristic-Based Skill bonuses cost the same as for Background Skills — +1 Character Point for +1 to the roll. If you adopt this method, you may want to change Background Skills to +1 point for +2 to the roll, but you could just leave them all the same.

On the other hand, increasing the cost for each +1 makes Skills harder for characters to use successfully, and tends to emphasize the base roll and/or Characteristic bonus. A cost of +3 or +5 Character Points per +1 to the Skill roll definitely makes it more difficult for characters to buy their Skills to really high levels.

ALTERING FAMILIARITY

Another way you can change the general scheme of Skill costs is to expand the rules regarding Familiarities.

Different Roll

Instead of starting Familiarity at 8-, the GM might consider using a different base roll. (This may depend on whether the Untrained Skill Use rules, page 18, are used in the campaign.) For example, the GM might lower the Familiarity roll to 6- or 7-, or raise it to 9- (equivalent to the base 9- for most Characteristic-Based Skills without the Characteristic bonus). This can have the effect of increasing or decreasing the "curve" of Skill acquisition (see below).

Advanced Familiarities

Instead of restricting Familiarities to 1 point for an 8- roll, the GM could allow characters to buy a flat 11- roll with a Skill — an *Advanced Familiarity* — for 2 Character Points. As with a normal Familiarity, characters cannot use any type of Skill Level to improve this roll, but the GM could assign appropriate Skill Modifiers.

Of course, an 11- roll for Advanced Familiarities isn't the only possibility. As indicated on the table on page 6, an 11- roll means a 62.5% chance to succeed with a Skill Roll (assuming no modifiers apply) — significantly more than half. If an Advanced Familiarity only provided a 10- roll, that would reduce the chance to a flat 50% (double the chance of an 8-), and a 9- to 37.5%. Both of those might suit the concept of "Familiarity" with a Skill better; on the other hand, they may not seem like a worthwhile investment for many characters.

Smoothing The Skill Roll Curve

To one degree or another, many of the optional rules above about changing how Skill Rolls are derived and what Skills cost are intended to "smooth out" the Skill Roll curve for games that desire greater precision. The standard *HERO System* rules primarily allow for rolls of 8-, 11-, and based on a Characteristic (usually meaning 12- or more). For 1 Character Point, characters can buy an 8- roll (a 26% chance of success, roughly speaking). For 2 points, if it's a Background Skill or you use the Advanced Familiarity rules, he can buy an 11- roll — a 62.5% chance of success, or a 36.5% jump for a single Character Point. For 3 points, he can increase that roll to, typically, 12- to 14- (74-91% chance of success).

For some campaigns, particularly those where Skills are important and most of the PCs rely on them extensively, those three stages are too extreme — they provide too much benefit for too little cost. To some extent this is an unavoidable byproduct of the bell curve that comes from rolling 3d6 for Skill Rolls, but it's possible to mitigate the effects. To compensate for

it, the GM changes how Skill Rolls are derived and/or what Skills cost, thus allowing for more options and a smoother advancement curve.

Here are some examples of alternate rules that address this concern. Most of them are primarily appropriate for Heroic campaigns; in Superheroic games where Primary Characteristics can easily reach 30 or more, alternate Skill Roll calculations may cause game balance problems.

■ for 1 Character Point, characters can buy an 8- roll with a Skill (26% chance of success); for 2 Character Points, they can buy a 10- roll with a Background Skill or as an Advanced Familiarity with other Skills (50% chance of success); for 3 Character Points they can buy a standard (9 + (CHAR/5)) Skill Roll (giving a character with a Primary Characteristic of 10 an 11- roll, or 62.5% chance of success, and one with a 20 a 13- roll, or 83.8% chance of success).

■ for 1 Character Point, characters can buy an 8- roll with a Skill (26% chance of success); for 2 Character Points, they can buy a 9- roll with a Background Skill or as an Advanced Familiarity with other Skills (37.5% chance of success); for 3 Character Points they can buy a Skill Roll calculated as (5 + (CHAR/2)) Skill Roll (giving a character with a Primary Characteristic of 10 a 10- roll, or 50% chance of success, and one with a 20 a 15- roll, or 95.4% chance of success).

■ for 1 Character Point, characters can buy an 8- roll with a Skill (26% chance of success); for 2 Character Points, they can buy a Skill Roll calculated as (8 + (CHAR/6)) (giving a character with a Primary Characteristic of 10 a 10- roll, or 50% chance of success); for 3 Character Points they can buy a standard (9 + (CHAR/5)) Skill Roll (giving a character with a Primary Characteristic of 10 an 11- roll, or 62.5% chance of success, and one with a 20 a 13- roll, or 83.8% chance of success).

■ for 1 Character Point, characters can buy a 7- roll with a Skill (16% chance of success); for 2 Character Points, they can buy a 9- roll with a Background Skill or as an Advanced Familiarity with other Skills (37.5% chance of success); for 3 Character Points, they can buy a Skill Roll calculated as (8 + (CHAR/4)) (giving a character with a Primary Characteristic of 10 an 11- roll, or 62.5% chance of success, and one with a 20 a 13- roll, or 83.8% chance of success).

■ for 1 Character Point, characters can buy a 7- roll with a Skill (16% chance of success); for 2 Character Points, they can buy a 9- roll with a Background Skill or as an Advanced Familiarity with other Skills (37.5% chance of success); for 3 Character Points, they can buy a Skill Roll calculated as (7 + (CHAR/3)) (giving a character with a Primary Characteristic of 10 a 10- roll, or 50% chance of success, and one with a 20 a 14- roll, or 90.7% chance of success).

■ change the rules pertaining to Skill Levels and Familiarities slightly. Instead of banning the application of Skill Levels to Familiarities altogether, allow characters to apply Skill Levels to a Familiarity *if* those Skill Levels are bought *only* for that particular Skill or for a tight group of Skills (*i.e.,* only 2- and 3-point Skill Levels could apply to a Familiarity, not 5- or 8-point Levels). That allows characters to smooth out the Skill Roll curves for particular Skills if they really want to. For example, a character with three Familiarities and three 3-point Skill Levels for them would be spending 12 Character Points for three 11- rolls (as opposed for four discrete Skills, each with a Characteristic-Based roll). The GM could choose to allow some or all of the more expensive Skill Levels to apply, but that may cause game balance problems in some campaigns.

SUCCESS AND FAILURE

The most basic issues pertaining to any Skill Roll are these: what does it take to succeed with the roll... and what does success (and, likewise, failure) mean?

Successful Skill Rolls

If the character rolls less than or equal to his Skill Roll, taking all modifiers into account, he succeeds. The more he makes the roll by, the greater his degree of success.

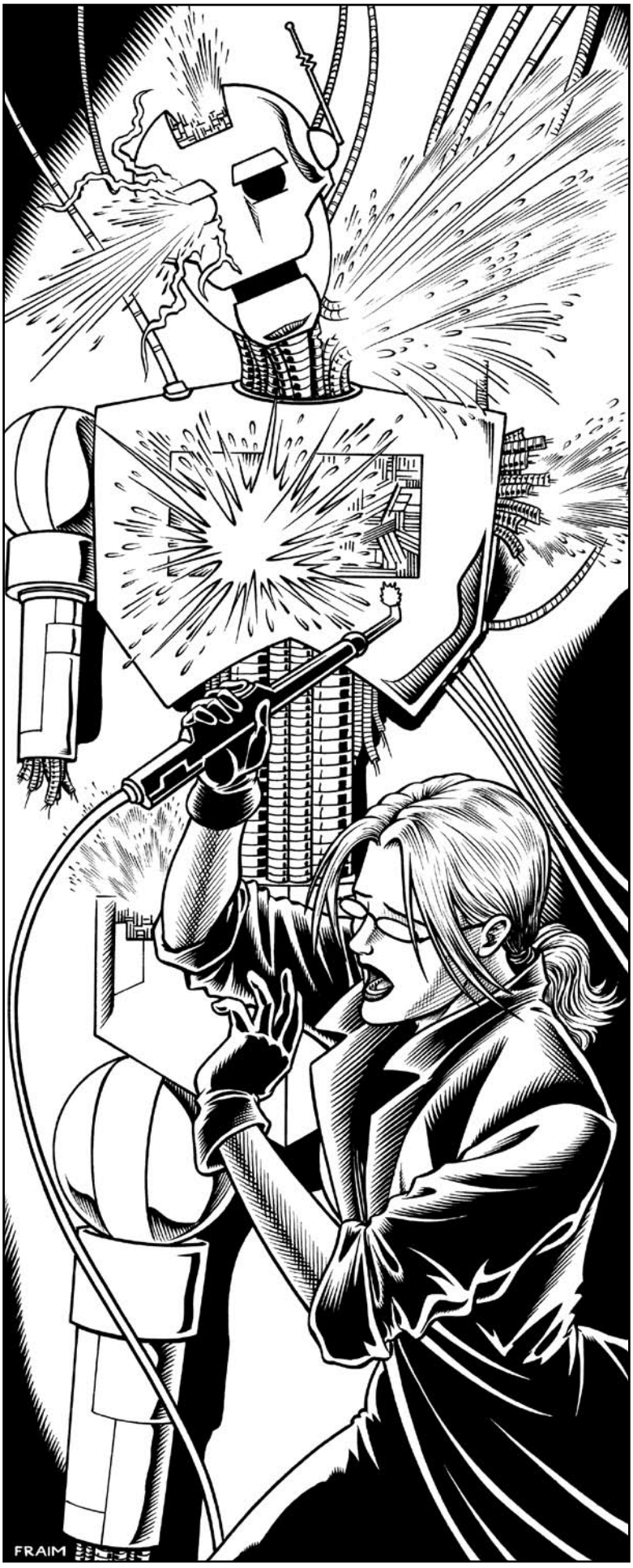
Example: *Two characters — Garrett Starbow, with Computer Programming 14-, and Alacar West, with Computer Programming 12- — both try to reprogram an enemy computer system to open a door. Garrett rolls a 12, and Alacar rolls a 7. Even though Alacar knows less about computers in general than Garrett does, he did much better at this task than Garrett did — he made his roll by 5, whereas Garrett only made his roll by 2. Apparently Alacar knows something about automatic door programming that Garrett doesn't — or maybe he just got lucky.*

DEGREE OF SUCCESS

As noted above, the more a character makes his Skill Roll by, the greater his "degree of success." In general this doesn't have any impact unless the character's trying to overcome a penalty or win a Skill Versus Skill Contest. However, some GMs like to assign additional effect to a greater degree of success to reward the character for his better-than-normal performance. In this case, the character achieves some bonus proportional to his degree of success. Examples include:

■ if the Skill Roll provides a bonus to CV (or the like), the amount of the bonus depends on the degree of success. If the character succeeds exactly, he gets a +1 bonus; for each additional point by which he succeeds, he gets another +1.

If this system seems too likely to give characters large bonuses, the GM can alter the impact of a high degree of success by increasing the amount of success needed for an additional +1 (for example, to +1 for every 2 points the character makes his Skill Roll by). Another possibility is a sliding scale: for an additional +1, the character has to make the roll by 2; for the next +1, by 4; for the next +1, by 8; and so on.



■ for every point the character makes the Skill Roll by, he receives a +2 (or greater) bonus on all related and appropriate Presence Attacks made that Phase — he's performed so impressively that it's easier to awe or frighten other people.

■ if the Skill Roll is used to operate a power with the *Requires A Skill Roll* Limitation, for every point the character makes the roll by, he can (if he chooses) increase the effectiveness of (*i.e.,* Active Points in) the power by 10% (or some other amount). The character must pay the extra END for the bonus Active Points used.

■ if the task takes a long time to perform (1 Turn or more), the character performs it more quickly. The amount of time saved is up to the GM, but typically 1 Segment or 1 Phase per point the roll succeeds by is appropriate. The GM can also invoke the rules on page 35 and rule that for each full 3 points the Skill Roll succeeds by, the character performs the Skill one step up the Time Chart more quickly. However, the character cannot reduce the time as much as a Critical Success would; see below. And of course, if a character takes extra time to get a bonus to his Skill Roll, that defines how long the task takes regardless of how well he rolls.

Critical Success

A result of 3 on a Skill Roll always indicates a spectacular success, known as a *Critical Success* in game terms. When a character achieves a Critical Success, the GM decides exactly what happens. When deciding, he should devise results to suit the situation and lend color or conflict to an encounter. If used correctly, a Critical Success is more than just a really good roll — it's also a way to add a twist, or at the very least some flavor, to the action in the game.

Here are some examples and guidelines for Critical Successes. In general, a Critical Success has a lasting impact (whereas a normal result for a Skill Roll usually doesn't have an effect beyond the immediate moment) that the character or his comrades benefits from. In other words, he doesn't simply succeed and move on — the Critical Success has repercussions that make their effects known at a later date.

■ The character is so successful, he receives a bonus of +2 to his next use of the Skill, either because he's so confident or has gained some insight into general use of the Skill.

■ The character performs the task *much* more quickly than normal — in other words, he completes the task earlier than expected. Move the time required to complete the task up two steps (or more) on the Time Chart. (Compare the amount the Critical Success makes the roll by to the rules on page 35 as a guideline.) The difference in the time he needed should be dramatic — for instance, the character announces it will take him an hour or so, and he finishes five minutes later.

■ If the situation requires multiple uses of the Skill, the Critical Success renders additional Skill Rolls unnecesary.

Failed Skill Rolls

A failed Skill Roll means the character can't perform the chosen action (such as picking a particular lock) or receives no benefit from the Skill. The more he fails the roll by, the greater his degree of failure (see below).

A character who fails his Skill Roll is still more proficient at a given Skill than a character without the Skill. The GM shouldn't assume that failing a Skill Roll is worse than not having the Skill at all. However, characters are better off not trying to use certain Skills — like Demolitions — unless they're reasonably proficient with them.

The GM may want to make some Skill Rolls himself, just to keep the characters guessing. In this case, he can tell them "You *think* the bomb is rigged properly" or "You're not sure they believed your disguise," according to the roll. If a character misses a roll by a significant amount, the GM can tell the player it seemed successful even though it wasn't (leading to complications). (See page 18 for more information.)

See the individual Skill descriptions in Chapter Two for more specific Skill-by-Skill discussion of the consequences of failed Skill Rolls.

RETRYING SKILL ROLLS

After a character fails a Skill Roll, in most cases he can try again, subject to one major restriction: he cannot retry the Skill on the same subject or roll again until the situation changes in his favor. A "change in favor" means he must somehow obtain at least a +1 modifier to the Skill Roll, which can be as simple as taking more time (see *Skill Modifiers,* page 31). Of course, retrying the roll typically means taking the Base Time again (or longer, to obtain a bonus for doing that if desired), making the preparations all over again, and so forth — and of course the character he must make and succeed with another Skill Roll to achieve his objective.

If a character fails a Skill Roll badly (by 4 or more) the GM may rule that retrying the Skill is not possible at that time. The GM may also cap the number of repeated attempts to use a Skill for a specific task (typically at 3-4 attempts), on the grounds that at some point that many failures in a row indicate the character just can't do what he wants to do no matter how hard he tries.

DEGREE OF FAILURE

As noted above, the more a character fails a Skill Roll by, the greater his "degree of failure." For most failures, this doesn't have any special impact or effect. However, if a character fails his Skill roll by a large enough amount, he may suffer additional negative effects. The exact threshold for this varies a little from Skill to Skill, as discussed in the individual Skill descriptions in Chapter Two. Typically a failure by 1 to 3 points is "ordinary," but failure by 4 or more points creates further complications for a character. For example, failing a Lockpicking roll by 1-3 just means the character can't pick the lock; he can try again after obtaining at least a +1 bonus (see above). But if he fails by 4 or more, the GM should impose an additional negative effect: a jammed lock, an alarm going off, a broken lockpick, or the like.

Some examples of "generic" failures not dependent on the Skill involved include:

■ if the Skill Roll was intended to provide a bonus to CV (or the like), the character suffers a corresponding penalty (or a penalty that gets worse the greater the degree of failure) in his next Phase.

■ for every point the character fails the Skill Roll by, he suffers a -2 (or greater) penalty on all related and appropriate Presence Attacks made that Phase — he's performed so poorly that he can't impress or frighten people as well.

■ if the Skill Roll is used to operate a power with the *Requires A Skill Roll* Limitation, for every point the character fails the roll by, the effectiveness of (*i.e.,* Active Points in) the power are reduced by 10% (or some other amount). However, the character must pay the full END cost for the power's normal total Active Points.

■ a follow-up attempt to use the Skill, or to correct the problem caused by the failure, takes 50% (or greater) more time than normal.

Critical Failure

A result of 18 on a Skill Roll always indicates a spectacular failure, known as a *Critical Failure.* When a character achieves a Critical Failure, the GM decides exactly what happens. He should devise results to suit the situation and lend color or conflict to an encounter. If used correctly, a Critical Failure is more than just a really bad roll — it's also a way to add a dangerous twist to the game or really worsen the character's situation in a challenging way.

Here are some examples and guidelines for Critical Failures. In general, a Critical Failure has a lasting impact (whereas a normal result for a Skill Roll usually doesn't have an effect beyond the immediate moment) that the character or his comrades suffers from. In other words, he doesn't simply fail and move on — the Critical Failure has repercussions that make their effects known at a later date.

■ The character fails so badly he receives a penalty of -2 to his next use of the Skill because his confidence in his ability is shaken.

■ The character fails so badly no other PC can attempt the same task (nor can the character correct the results of his failure). For example, the character breaks his lockpick in the lock, and none of his comrades can try to pick the lock now because he's jammed the lock beyond repair.

■ For Interaction Skills, the character fails so badly his target believes the worst possible thing — worst, in this case, meaning whatever makes the PC's life more difficult. For example, suppose a PC attempts to use Persuasion to convince a guardsman he didn't rob the merchant. The PC fumbles, and the guardsman believes the PC not only robbed the merchant, but is also the murderer who killed the Prince's second cousin last night.

HALF ROLLS

Some Skills provide additional benefits or bonuses if a character makes a "half roll." This means his roll has to be equal to or less than half of his modified Skill Roll (standard rounding rules apply). For example, if a character's Skill Roll, after applying all modifiers, is 12- or 11-, then a half roll is any roll of 6 or less. If his roll is 16- or 15-, a half roll is 8 or less.

■ Someone witnessed the PC's failure, embellished the story, and told all his friends. For the next few days, wherever the PC goes he hears people snickering about him. He may suffer penalties on relevant Presence Attacks.

■ If the situation requires multiple uses of the Skill, the Critical Failure means the entire task fails, so the character isn't even allowed to make the other Skill Rolls. Similarly, if the Critical Failure occurred with a Complementary Skill Roll, the failure makes it impossible for the character to succeed with the base Skill's roll.

Hiding Skill Roll Results

Sometimes the GM may not want a character to know whether he's succeeded or failed at a Skill Roll. In many cases a character knows right away what's happened: the bomb does or does not explode; he does or does not succeed with making a "bootlegger reverse" while driving; he does or does not get his weapon out quickly with Fast Draw. But in other cases success or failure aren't immediately apparent. A character may *think* he's properly set a bomb to explode at a certain time in a certain way, but he could be wrong. He may *think* he's found the information he needs, when in fact he's overlooked something important. He may *think* he's properly analyzed the objects he's found or the nature of the current situation, when he's actually made a crucial mistake. He may *think* he's persuaded someone to agree with him... but can he be sure?

In situations where the GM (a) thinks that a character's ability to evaluate the outcome of a Skill Roll would be in doubt, and (b) where that doubt could add fun to the game, the GM should conceal the outcome of the Skill Roll from the player. The easiest way to do this is for the GM himself to make the Skill Roll; if the player strongly prefers to roll his own dice, the GM should have him roll them so that only the GM can see the result. He then provides whatever information seems most appropriate: "You think you set the detonation charge properly"; "You think you've convinced her you're right"; "You've been through every book and map you can find and you're pretty sure you know how to find the Dark Lord's Tomb."

Of course, even with a system of "Skill outcome uncertainty," characters should usually be able to figure out if they've succeeded or failed. Part of being adept with a particular Skill means being able to evaluate how good a job you've done. But in some cases, particularly marginal success and dismal failure, the "special effect" of the Skill Roll may be that the character mistakenly judges the results of his work.

UNTRAINED SKILL USE

Sometimes a character wants to attempt an action for which he doesn't know the appropriate Skill — not even as an Everyman Skill. For example, he might want to bribe a guard even though he doesn't have Bribery, defuse a bomb even though he knows nothing about Demolitions, or wants to find his way through the wilderness even though he lacks the *Navigation* Skill. The *HERO System* refers to this as *Untrained Skill Use*.

When a character tries to use a Skill he does not have (*i.e.,* which he has not paid Character Points for), he has a flat 6- roll (or about a 10% chance of success). He cannot apply any Skill Levels of any type to improve this roll, but at the GM's option Skill Modifiers (both positive and negative) may apply. Additionally, the GM may allow the character to make a relevant Characteristic Roll as a Complementary Skill Roll to improve his chances; that way, characters with high Characteristics are likely to be better at Untrained Skill Use than low-Characteristic characters, which makes a certain amount of sense.

The GM may want to cap Untrained Skill rolls at 8- regardless of bonuses. Otherwise, characters who pay for Familiarities may feel they've wasted their points. However, if the GM lets characters who pay for Familiarities make Charateristic Rolls as Complementary Skills, as described above, then Familiarities remain a reasonable purchase and there's no reason to cap Untrained rolls. Alternately, the GM may think that 6- is too high for Untrained Skill Use; if so, reduce the roll to 5- (about a 5% chance of success).

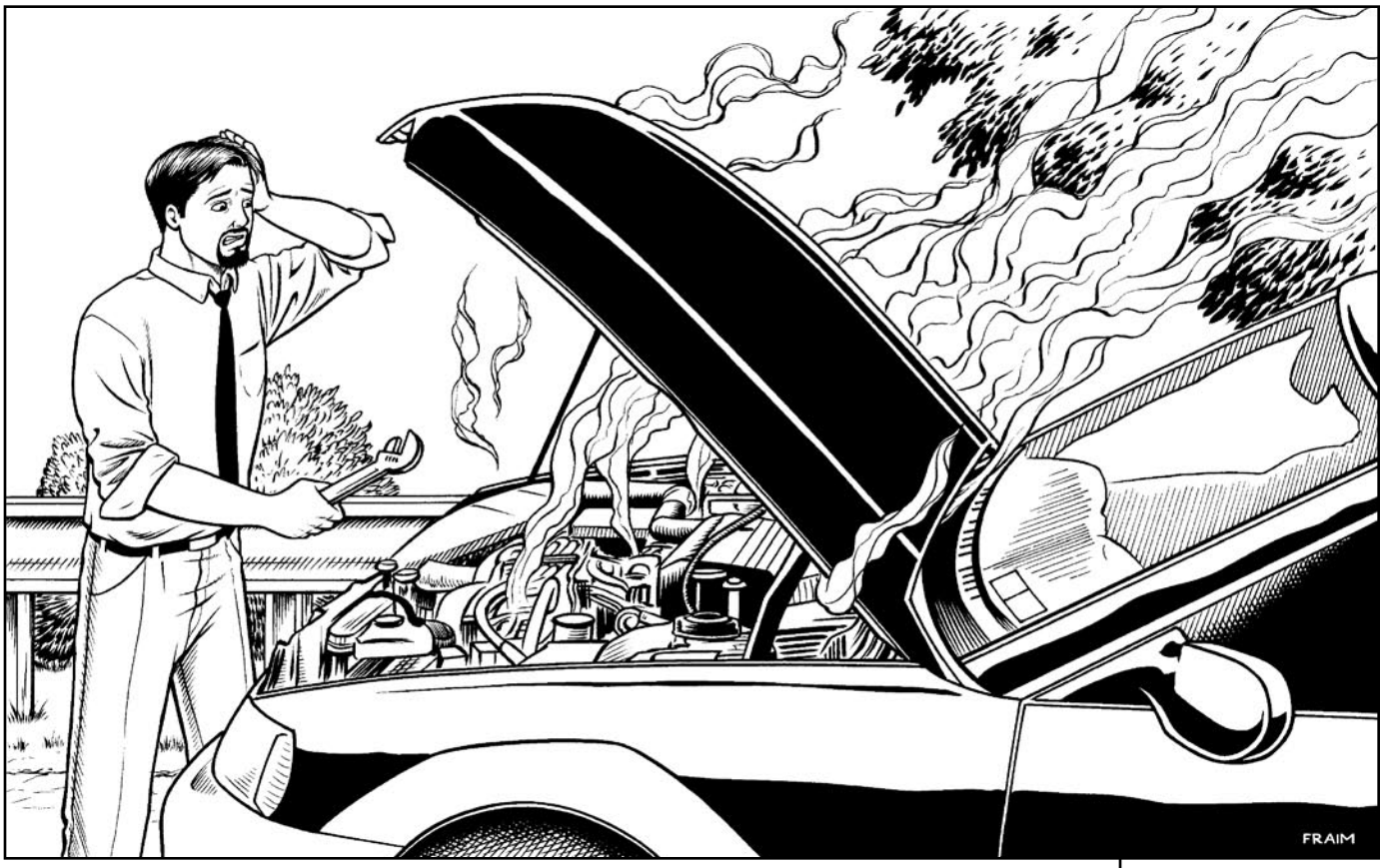
The Untrained Skill Use rules are optional; the GM doesn't have to let characters use them, or can choose to use them only some of the time. For example, Knowledge Skills of obscure subjects probably shouldn't be subjected to the Untrained Skill Use rules. It's not conducive to game balance to give characters a shot at knowing just about anything; only if a subject could reasonably be considered as potentially falling within the realm of "general knowledge" should the Untrained Skill Use rules apply to most Background Skills.

UNTRAINED SKILL USE AND EVERYMAN SKILLS

If the GM decides to use the Untrained Skill Use rules, he may want to get rid of Everyman Skills, since every character will already have some chance to perform any Skill anyway. If he wants to retain the concept of Everyman Skills, he could as a default give all characters a +2 bonus with those Skills, thus making their Untrained roll an 8-.

DEFAULTING FROM CHARACTERISTIC ROLLS

Another possible way to handle the concept of untrained Skill use is to let characters use Characteristic Rolls in some way. Two possible ways to do this include:



Characteristic-Based Untrained Skill Rolls

First, the GM can make Untrained Skill Use rolls a Characteristic-Based Roll. For example, when a character tries to use a Skill he does not have (*i.e.,* which he has not paid Character Points for), perhaps he receives a roll equal to (2 + (CHAR/5)) or less (all other standard Untrained Skill Use rules apply). Thus, a character with PRE 10 who tries to bribe a guard (use Bribery) has to roll a 4- to succeed; one with PRE 20 has to roll 6-; and one with PRE 30 has to roll 8-.

If the GM uses this rule, he may want to redefine what a Familiarity is. Rather than simply giving a character a flat 8- roll, a Familiarity should also grant a Characteristic-Based Roll — one sufficiently higher than an Untrained roll to justify the cost. A roll of (4 + (CHAR/5)) or less would probably work well

In either case, the GM should determine the roll calculations based on how important he wants Skills to be in the game, and how competent he wants characters to be generally. See pages 11-15 regarding the nature of Skill Rolls and the implications of changing their different components.

Characteristic Rolls With Penalties

Second, you can simply let characters make Characteristic Rolls at significant penalties to use a Skill untrained. At a minimum, the penalty should be -5, and -8 or more isn't out of the question.

RELATED SKILLS

In some cases a character may not have the specific Skill needed for a particular task, but he has a Skill that's similar in some way. For example a character might have Acrobatics but not Breakfall, or Electronics but not Computer Programming for the purposes of building computers. If the GM considers it appropriate, he can let a character use a "related Skill" as a substitute for the right Skill at a penalty of -4 (or worse, depending on just how closely related they are). However, the roll for a related Skill should not sink below 7-, thus ensuring it's always at least a *little* better than Untrained Skill use.

SKILL VERSUS SKILL CONTESTS

Sometimes characters use their Skills in opposition, such as when one character tries to conceal something while another character tries to find it. The *HERO System* refers to this as a *Skill Versus Skill Contest* and uses the following rules for it.

In any Skill Versus Skill situation, the character taking action makes his roll first. If he succeeds, the character who reacts takes a negative modifier based on the first character's degree of success (see below). For example, the character setting a bomb makes a Demolitions roll. The character trying to defuse the bomb suffers a modifier based on how well the first character succeeded with his Demolitions roll.

If the first character fails his Skill Roll, the opposing character doesn't have to make a Skill Roll to undo the first character's efforts — he can undo them automatically. If the first character succeeds with his Skill Roll, the opposing character must (a) have the appropriate Skill and (b) succeed with a Skill Roll at -1 for every 1 point by which the first character makes his Skill Roll. In other words, the second character must succeed by the same or a greater margin as the first.

Example: *Andarra has Computer Programming on a 12-. She knows a hacker plans to steal valuable information from her computer. She decides to set up defensive programs, and rolls a 14 (failing her roll by 2). Andarra has not set up a valid program. She tries again, taking more time in this attempt, so the GM gives her a +1 modifier to her Skill Roll. Andarra now needs to roll a 13 or less. She rolls a 9, succeeding by 4. Her data is now protected from casual access. Anyone trying to get to the data must make a Computer Programming roll at a -4 penalty.*

Some of the Skill-specific rules in Chapter Two specify that some factor is determined by how much the winner wins a Skill Versus Skill Contest by. (For example, look at some of the rules for negotiating prices with Trading.) This means that the amount the loser's roll succeeded by is subtracted from the amount the winner succeeded by, with the result determining the outcome. If the loser failed the roll altogether, the winner subtracts zero from his roll.

Example: *Aljhar the Merchant and Hwasim the Smuggler are negotiating the price for some spices using the Trading rules for differing starting prices (page 339). Aljhar (the buyer) makes his roll by 4 and Hwasim (the seller) makes his by 6, so Aljhar must raise his offer by ((6-4) x 10% =) 20% of his initial offer. If Aljhar had failed his roll, Hwasim would subtract 0 from his success, meaning Aljhar would have to raise his offer by ((6-0) x 10% =) 60% (to a maximum of Hwasim's asking price).*

Resist the temptation to overuse the Skill Versus Skill system — in obvious situations, there's no need to make Skill Rolls. For instance, if the first character conceals an object in a drawer, and the opposing character searches that very drawer, he'll find the object. Roleplaying these situations reduces the need to make die rolls.

ALTERNATE SKILL CONTESTS

For most situations and campaigns the Skill Versus Skill Contest rules work very well. However, in some cases the GM may want to make things harder on one of the participants in the Contest. To do so, he only has to alter the ease with which the opposing character can undo the initiating character's efforts. To make the Contest easier for the initiating character to win, the opponent must succeed with his roll by *2 points* for every 1 point the initiating character's roll succeeded by. To make the Contest easier for the opposing character to win, he only has to succeed with his roll by 1 point for every *2 points* by which the initiating character's roll succeeded. In either case, the GM can set the amount higher, if desired.

PERCEPTION ROLLS IN SKILL CONTESTS

Most Skills work directly against the same Skill. However, some Skills, such as Stealth, work against a Perception (PER) Roll: the first character makes a Stealth roll, and characters attempting to spot him make PER Rolls. In some situations and campaigns, this may not seem entirely fair — a character who's paid Character Points for a Skill can be opposed and defeated by a character using a free ability. If the GM agrees with this assessment, he can impose a -1 (or greater) penalty on PER Rolls in Skill Versus Skill Contests.

COMPLEMENTARY SKILLS

Sometimes a character has two (or more) Skills that apply to the problem at hand. In such situations, the GM determines which Skill is the primary Skill, and then decides what other Skill(s) are *Complementary* to the task. The character then attempts a Skill Roll for the Complementary Skill(s). For every 2 points by which the character makes his Complementary Skill Roll(s), he adds +1 to his chance to perform the primary Skill. For example, if a character makes a Complementary Skill Roll by 0, 1, or 2, he gets a +1 to the primary Skill Roll; if he makes the roll by 3 or 4, he gets +2 to the primary Skill Roll; and so forth.

The Complementary Skill rule also applies if another character helps the character perform the Skill. For example, two characters with Electronics could team up to build a gadget. The one with the lower roll makes his Skill Roll as Complementary to the other character, thus increasing their overall chance of success. A character cannot provide Complementary Skill help to another character via a Mind Link, radio communications, or the like unless the GM specifically permits this (as he might with, for example, some Knowledge Skills where the character's simply trying to remember a fact that can easily be discussed).

Gamemasters who want to improve characters' chances of success should allow many Complementary Skills; GMs who want to make things difficult should permit only one (at most). If a character has a large number of potentially Complementary Skills, the GM may wish to speed game play by having him make the single most Complementary Skill's roll, then provide a bonus to that roll for each additional Complementary Skill available (such as +1 per additional Complementary Skill, or per +2 additional Complementary Skills).

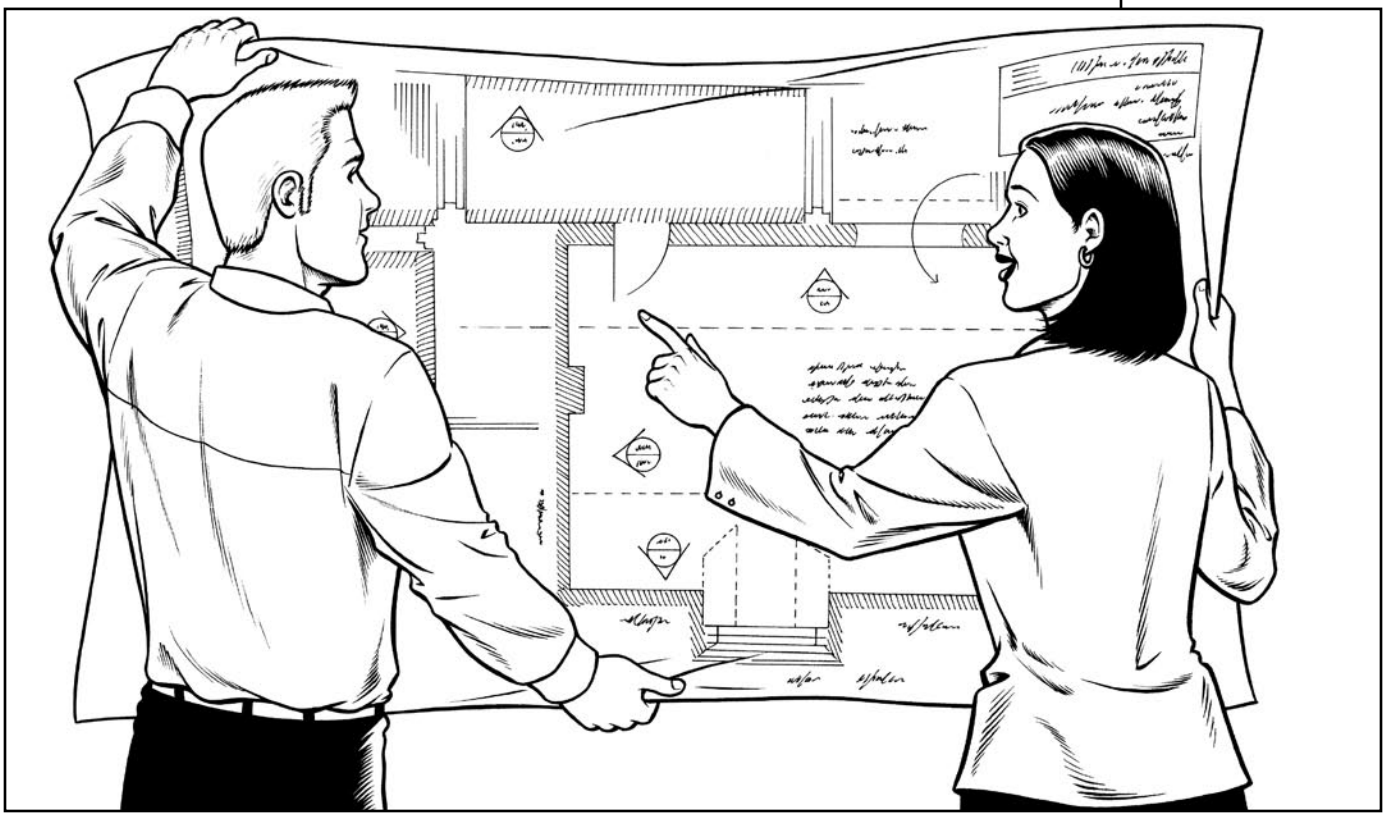
Characters can use Familiarities as Complementary Skills. In appropriate circumstances, Characteristic Rolls or PER Rolls can act as Complementary Skill Rolls.

Example: *Randall Irons tries to get some information from a young woman; he believes she knows the whereabouts of the Aztec artifact stolen from his hotel room. Randall has both Conversation 12- and Seduction 13-. Since Randall wants to gain information, the GM rules that Conversation is the primary Skill, and Seduction is Complementary. Randall rolls a 10 on his Seduction roll, making it by 3. The charming Randall gets a +2 to his Conversation roll for this discussion, thus improving his chance to find out any useful information the woman knows.*

Typically failing a Complementary Skill Roll doesn't inflict any penalty on the character's Skill Roll (whether he's the one making the Complementary Skill Roll, or another character is). However, the GM can impose a penalty if he considers that appropriate (for example, if the Complementary Skill Roll suffers a Critical Failure).

DEGREES OF COMPLEMENTARINESS

The standard Complementary Skill rules don't differentiate between Complementary Skills that are closely related to the task at hand, and those that are less relevant — any Skill that qualifies as Complementary can provide a bonus. This may not suit some GMs, particularly those running campaigns where Skill use is an important aspect of adventures. For those games, the GM can use the *degree of complementariness* rules so that some Complementary Skills are better than others.



DEGREE OF COMPLEMENTARINESS TABLE

Degree Of Complementariness	Automatic Bonus	Maximum Bonus
Extremely Complementary	+2	+5
Very Complementary	+1	+4
Average Complementary	None	+3
Low Complementary	None	+2
Poorly Complementary	None	+1

As detailed in the accompanying table, the degrees of complementariness rules assign Complementary Skills to one of five categories. From best to worst, these are Extremely, Very, Average, Low, and Poorly Complementary. The greater the degree of complementariness, the greater the maximum bonus the Complementary Skill can provide. Furthermore, some highly Complementary Skills can, at the GM's option, provide an *automatic* bonus to the base Skill Roll, even if the Complementary Skill roll fails (provided the failure isn't by 4 or more, or a Critical Failure). The automatic bonus is part of, not in addition to, the rolled bonus. For example, if a character has an Extremely Complementary Skill (+2 automatic bonus) and makes his roll by 8 (for a +4 bonus), he grants a +4 bonus to the base Skill Roll (not +6).

The GM determines what degree of complementariness a Complementary Skill has based on the situation, the special effects involved (if any), common sense, dramatic sense, and considerations of game balance. Most Complementary Skills tend to be Average Complementary; only a truly closely-related Skill should qualify as Very or Extremely Complementary. This is most appropriate when a character has a tightly-focused Background Skill directly related to the task.

TEAM SKILL USE

As the Complementary Skill rules note, another character can make a Complementary Skill roll to aid the primary character performing a task. This works fine when there are just two characters involved, but if two or more characters want to make Complementary Skill rolls to help the primary character, the situation can become tricky, time-consuming, and potentially unbalancing.

In this case the GM may want to simplify things by having only one secondary character make a Complementary Skill Roll, with a bonus provided to represent having a "team" of additional characters who are assisting the primary character. The bonus may be an automatic one (+1 for every additional character, or additional two characters, or the like), or it may depend on which characters make their Complementary Skill rolls (each additional secondary character who succeeds with his Complementary Skill roll provides a +1 bonus to the main secondary character's roll; failure by 4 or more, or a Critical Failure, imposes a -1 penalty).

To keep the team Skill use rules from becoming too beneficial, the GM may rule that the main Complementary Skill Roll has to be made by the team member with the *worst* Skill Roll. That way a character benefits from having a team of highly-skilled individuals instead of just one skilled individual and a bunch of mediocre ones.

The "team Skill use" rolls work particularly well when the PCs have access to a large number of NPCs who possess similar Skills. For example, suppose the heroes are the bridge officers of a starship, with a whole crew of lesser officers and enlisted men at their command. In that situation they could easily assign a large number of personnel to a specific task (such as ordering the Engineering Department crew to repair damage to the ship or get the engines working again). This may also involve using the Extended Task rules (see page 23).

Getting Work Done More Quickly

At the GM's option, team Skill use can also reduce the amount of time required to complete a task. When figuring the time required (using the Base Time rules for the Skill in question), divide by the number of people working on the project. If this cuts the time down too much, the GM can artificially "reduce" the number of people involved for purposes of dividing the time.

SKILL SPECIALIZATIONS

Sometimes characters want to be particularly skilled with some aspect of a Skill. While they want to have a general grounding in the Skill as a whole, they want to be even better at some specific task or use of that Skill. For example, a ranger in a *Fantasy Hero* game might want to be stealthy (*i.e.,* have the *Stealth* Skill), but particularly stealthy in woodland environments; a character with Forgery (Money) might want to have an especially high degree of skill at creating false euro notes. This is called a *Skill Specialization.* There are two ways a character can have a Specialization in the *HERO System.*

COMPLEMENTARY SKILLS

First, the Complementary Skill rules allow characters to "specialize" some Skills by buying related Background Skills. For example, a character with Forgery (Art Objects) might want to have a special talent for forging Rembrandt paintings. He could buy KS: Rembrandt or PS: Forge Rembrandts, and then use those as Complementary Skills for his Forgery rolls when he tries to forge a Rembrandt painting. A character should get the GM's permission before buying a "Complementary Specialization," since the GM may not consider all Skills appropriate for this form of Specialization. For example, it doesn't always work well for physical Skills, like Acrobatics and Contortionist.

This form of Specialization also allows GMs to individualize certain Skills for his campaign. All he has to do is require characters to buy particular Background Skills when they buy related Skills. For example, in a Science Fiction campaign where the characters all serve the Galactic Federation, when a character buys Computer Programming the GM could require him to also buy PS: Use Galactic Federation Computers to reflect the character's more advanced training with that type of computer.

LIMITED BONUSES

Second, the character can buy an increase to his Skill Roll with a Limitation reflecting the circumstances under which he's more skilled. For example, the ranger described above could buy: +3 to Stealth (6 Active Points); Only In Woodlands (-1) (total cost: 3 points). Since these are ordinary increases to the Skill Roll bought as part of the Skill, not Skill Levels, characters can apply Limitations to them normally. (If the character wants to have three or more Skills he's better at in the same way, buying Skill Levels with a Limitation is more efficient.) This method works well for Skills involving physical activity, such as Stealth or Shadowing, but may not simulate knowledge-oriented Specializations as well as a Complementary Skill.

EXTRAORDINARY SKILL ROLLS

As an optional rule, a character can attempt an incredible feat with a Skill if he has a Skill Roll of 18- or better. This is known as an *Extraordinary Skill Roll.* Any incredible feat takes a -10 penalty (or more) to begin with, and the GM can assign other modifiers as he sees fit. For example, a character could use Breakfall to land on his feet and take no damage after a fall from an airplane, or a character with Persuasion could convince a target of a patent untruth ("Are you going to believe me or your own eyes?").

Because the Extraordinary Skill Roll rules use a typical penalty of -10, most individual modifiers listed in this book are capped at -9. However, there are a few exceptions, such as the expanded rules for Knowledge Skills in Chapter Two. If the GM routinely finds that characters in his games are suffering single (or even multiple) Skill Roll penalties close to -10, he should consider raising the threshold for what constitutes Extraordinary Skill use to -15 or worse.

CINEMATIC SKILL SUBSTITUTES

The Extraordinary Skill rules allow a GM to run a more fantastic or cinematic campaign with amazing feats not possible in the real world or even most adventure fiction. With the GM's permission, a character can also use them as a quick-and-dirty way to buy the equivalent of several Skills as a single Skill. As discussed above under *Combining Skills,* characters usually do this with Professional Skills. For example, rather than buying numerous Skills to represent the fact that he's a cinematic spy (Combat Driving Cryptography, Forgery, Lockpicking, Security Systems, Shadowing, Stealth, Systems Operation...), a character could buy a Skill like *PS: Spy* or *PS: Tradecraft* with an 18- or higher roll (usually at least 20-, if not more), then rely on the Extraordinary Skill Roll rules to let him perform just about any espionage activity. This isn't appropriate for games stressing "realism" or precise Skill purchases and use, but it can work well for some cinematic campaigns.

BASE TIMES

As noted on page 11, making a Skill Roll usually requires a Half Phase Action, but this can vary tremendously. Each Skill in Chapter Two has a *Base Time* section that describes the minimum time necessary to perform various tasks with that Skill. The GM can use that information as a guideline to determine Base Times for other uses of the Skill.

DETERMINING THE BASE TIME

Typically the Base Time for a Skill depends on simple common sense and real-world experience, leavened by the "dramatic action" emphasis of the *HERO System* rules. For example, a little bit of research makes it apparent that hacking into a secured computer is, "realistically" speaking, a complex, time-consuming task. At a minimum it's likely to take an hour, and it could take days, weeks, months, or even years. But in adventure fiction and movies, computer-savvy characters often seem to hack systems much more quickly than that. To simulate this, the GM might set the Base Time for using Computer Programming to hack into a system as 1 Minute or 5 Minutes for a computer with basic/simple security, and when necessary increase the Base Time to represent stronger types of security. A GM in a more "realistic" game might start with a Base Time of 1 Hour and go from there.

REDUCING THE BASE TIME

As discussed on page 35, a character can obtain a bonus to his Skill Roll for taking longer than the Base Time to perform it. Similarly, he can perform a Skill more quickly than normal if he makes his Skill Roll at a -3 penalty per step up the Time Chart. If the GM uses the *Degrees Of Success* rules on page 15, a successful Skill Roll can reduce the time required slightly; a Critical Success can reduce it significantly. Of course, if a character takes extra time to get a bonus to his Skill Roll, that defines how long the task takes regardless of how well he rolls.

EXTENDED TASKS

Some tasks are so enormous or so complex that they could easily take weeks or months. Examples include building a new starship from scratch, curing an epidemic, or fighting a war. If you view them in the abstract, you could simply resolve them as a single Skill Roll with a large Base Time and various modifiers — but that's not necessarily much fun, and it doesn't allow individual characters to shine or to apply different Skills to different aspects of the situation.

As an optional rule, the GM can treat this sort of situation as an *Extended Task.* To perform an Extended Task, the GM divides the overall task into "sections" and assigns each one an appropriate Skill (and Skill Modifiers, if any) and Base Time. The characters involved have to succeed with each section before moving on to the next, and in the process they may make their job easier (or harder) and quicker (or slower) depending on how well they succeed (or fail). This works particularly well when the characters have a deadline to meet for the Extended Task.

For each section of the Extended Task, the primary character involved makes the Skill Roll chosen by the GM. The Complementary Skill rules apply, particularly in terms of other characters helping out (the Team Skill Use rules, page 22, may also come into play). The GM can use the Degrees Of Success/Failure rules to allow the characters to shave time off the work (and thus reduce the overall time needed to complete the Extended Task). Characters can deliberately push themselves to work faster by accepting the -3 penalty per step up the Time Chart, or if necessary can take extra time to get a bonus to the Skill Roll (but at the risk of missing their deadline to finish the Extended Task).

As the characters work on an Extended Task, the GM should interpret their success or failure in a dramatically appropriate way. Don't just let them make rolls and move on; explain what the rolls *mean* in setting terms and give them an impact beyond mere success or failure.

Example: *Prince Wolfgang and his friends (the PCs) need to build some fortifications quickly so they can stem an invasion of Thurgandia. They have a small army, plenty of tools, and a nearby forest to supply raw materials. The invading dwarven army will arrive in five days. The GM rules that building the best possible fortifications (given the resources available) will take 1 Week and require a Tactics roll. (He chooses Tactics because several PCs have this Skill, and none have a more directly relevant Skill like PS: Castle Design, PS: Build Fortifications, or PS: Combat Engineer. He assumes at least a few NPCs have Skills like that, though.)*

The GM decides to use the Extended Task rules to handle this situation, since that will emphasize the drama of trying to get the fortifications ready in five days instead of seven. He divides the work into four sections: clear and prepare the land; obtain and prepare raw materials; build basic fortifications; build advanced fortifications. Each takes about a day and a half to two days, give or take; the PCs will have to work hard to do all the tasks in just five days.

First, the heroes and their army clear and prepare the land — they remove trees, dig the outlines of moats, pits, and other obstacles, and pile up a mound of dirt to give their fortress some elevation. The GM has Wolfgang make a Tactics roll. First two other PCs make theirs (one fails, one succeeds by 1) and one NPC makes his PS: Combat Engineer roll (succeeding by 2). The Complementary Skill rolls give Wolfgang a total +2 bonus. He rolls well, succeeding by 3. This is enough to save some time, so the GM rules that the whole job takes only a day, rather than a day-plus.

Second, the characters must obtain the raw materials — mostly tree trunks and large stones — they need. They head off into the forest with their army and a lot of axes and saws. The GM decides that one PC, who has PS: Woodcutter because he used to help his father with that job, is the primary character for this section of the Extended Task. None of the other PCs has any relevant Skill, so the character rolls. He succeeds exactly. The heroes have their supplies, but it took a day and a half to get them. The dwarven army arrives in two and a half days....



Third, the heroes have to build the basic fortifications — lay out and erect the log palisades and so forth. Wolfgang makes a Tactics roll with a +1 bonus from Complementary Skills; unfortunately, the NPC with PS: Combat Engineer failed his roll badly (-4), so the GM rules that he was badly hurt in an accident and can no longer help. Wolfgang's roll succeeds exactly, so the job is finished in a day and a half. One more day and battle will be joined.

Fourth and last, the heroes and their army need to put the finishing touches on the fort, finalize the moat and other trenches, and prepare the rest of the obstacles to slow down the dwarves. Wolfgang makes another Tactics roll, with a +2 bonus from Complementary Skill rolls. He succeeds by 6! The GM rules that with an inspirational speech and setting an example by working hard himself, Prince Wolfgang inspires the men to work extra hard so that they finish the fortifications in less than a day. Now they can snatch a few hours' rest before the dwarven army reaches the fort.

Task Difficulty

Alternately, the GM can handle extended tasks and similar challenges by assigning them a *Task Difficulty* rating. The character makes one roll for each Base Time period that passes, and the amount he makes the roll by subtracts from the Task Difficulty. When the Task Difficulty reaches zero, the character has completed the task.

Using the standard "Ease Of Task" categories on page 31, a Routine task usually has a Task Difficulty of 0-2; an Easy task usually has a Task Difficulty of 3-4; an Average task usually has a Task Difficulty of 5-10; a Difficult task usually has a Task Difficulty of 11-20; an Extremely Difficult task usually has a Task Difficulty of 21-40; and a Sheer Folly task usually has a Task Difficulty of 41 or higher. Since the Ease Of Task sets the Task Difficulty, characters do not also get the Ease Of Task modifier to their Skill Rolls.

If a character fails a roll while using the Task Difficulty system, it usually means he accomplished nothing during that time period. If he fails badly (by 4 or more) the amount he failed by *adds to* the Task Difficulty — he's made things harder on himself. For a Critical Failure, the GM might increase the Task Difficulty even more.

Example: *Smooth-talking troubador Whistler tries to persuade an innkeeper to give him room and board for the night in exchange for playing and singing in the inn's common room for several hours. The innkeeper is stubborn and miserly, so the GM decides to use the Task Difficulty system. He rules that the Base Time for this Persuasion task is 1 Turn and that it's a Difficult task with a Task Difficulty of 15. Whistler wheedles and persuades for 1 Turn using his Persuasion 14- and makes his first roll. He rolls a 10, making it by 4, thus reducing the Task Difficulty from 15 to 11. He talks for another Turn, making his roll by 1; the Task Difficulty becomes 10. A third Turn of talking yields a great roll, 8, so the Task Difficulty falls to 4 — the innkeeper's wavering! But then Whistler says something that strikes the innkeeper the wrong way — he rolls an 18! Since this means failure by 4 or more, the GM adds the amount failed by (4) to the Task Difficulty, bumping it back up to 8. It takes Whistler three more rolls — for a final total of seven Turns, or nearly a minute and a half, of talking to get the Task Difficulty to 0 so he can have a room and meal for the price of a few songs.*

You can also use the Task Difficulty rules to create "dramatic tension" with tasks that have to be accomplished by a specific deadline (such as "disarm this bomb in four minutes or the building goes up in a mushroom cloud" or "better fix the engine in the next two minutes or we're gonna crash!"). The GM sets a Task Difficulty, and if the character doesn't get the work done in time, bad things happen....

For Skill Versus Skill Contests, the GM can set a Task Difficulty as a target number to indicate when the character initiating the Contest wins it (if ever). In this case, the Task Difficulty is reduced only by the amount the initiating character's roll exceeds the defending character's — and if the defender wins, the Task Difficulty increases by the amount he won the Contest by.

Example: *Take the same example above, but the GM lets the innkeeper use his EGO Roll 12- to resist Whistler's Persuasion 14- in a Skill Versus Skill Contest. For the first roll, Whistler rolls a 10 and the innkeeper rolls a 13, failing by 1. Whistler won the Contest by 5, so the Task Difficulty decreases to 10. In the next Turn, Whistler rolls a 13 but the innkeeper rolls a 10, so the innkeeper wins by 1 and thus the Task Difficulty increases to 11. The Contest proceeds until Whistler wins, Whistler gives up in disgust, or the innkeeper refuses to discuss the matter anymore.*

Alternately, if the Skill Versus Skill Contest is less a matter of "two characters opposing each other" than it is "two characters competing to complete a task first," the GM may set a Task Difficulty for them and let each of them make his Skill Rolls. The first one to reduce the Task Difficulty to 0 gets the job done first and wins.

LEARNING SKILLS

The standard *HERO System* rules don't have any specific information on how characters learn Skills, how long the learning process takes, or the like, since this can vary wildly from genre to genre. For example, in some of the more cinematic genres, such as superheroes, it's not uncommon for characters to learn new Skills quickly — a few panels or frames of "training scenes" are all that's needed for a character to master some new ability. (Or he might even learn it *instantly* via magic or psionic implantation.) On the other hand, in more "realistic" genres, such as Low Fantasy or some types of Dark Champions games, it may take a character weeks or months just to learn the rudiments of a Skill.

Gamemasters who want to incorporate the learning of Skills (and related matters) into their games can use the following optional rules. The rules primarily refer to Characteristic-Based Skills. To use them for other Skills (like Defense Maneuver, Language, and Weapon Familiarity), simply adjust the time required based on the cost ratio. For example, where the rules refer to spending "3 Character Points" on a Skill, it would take one-third the time to spend 1 Character Point on a Language, two-thirds the time to buy WF: Common Melee Weapons, and five-thirds (or 66% longer) to learn Defense Maneuver II.

How To Learn A Skill

To learn a Skill, a character must have access to a source of information about it. Usually this means a teacher, but sometimes characters learn a Skill on their own.

TEACHERS

The easiest and most common way to learn a Skill is from someone who already knows it — a teacher, in other words. Any character who knows a Skill can teach it to another character. However, unless the teacher has the *Instructor* Skill (page 362), he cannot teach the student to use it with a higher roll than the teacher himself has, even if the student has a higher relevant Characteristic than the teacher does. For Skills that don't involve rolls, characters lacking Instructor can only teach as much of the Skill as they know (*i.e.,* for as many points' worth of ability as they have).

After spending his full 3 Character Points on the Skill, the student has a roll equal to the teacher's or his own Characteristic-based roll, whichever is *less.* If his roll is less than what his Characteristic gives him, then he can improve it on his own. He must spend 1d6 weeks away from the teacher using the Skill at least once per week. At the end of this period, his roll rises to Characteristic-based. (The GM may change this period if he wishes; another option is for the character to make 1d6+1 legitimate uses of the Skill during game sessions.)

Example: *Chang Li (DEX 23) wants to learn how to tumble and flip like an acrobat. He goes to Master Po (DEX 15, Acrobatics 12-) and asks to be taught the Acrobatics Skill. After receiving the generous gifts Chang Li brought, Master Po agrees to instruct him.*

Master Po teaches Chang Li diligently and well. However, because Po only has Acrobatics 12- and does not have the Instructor Skill, after spending 3 Character Points on the Skill Chang Li also has only a 12- roll with it, even though his DEX would normally provide him a 14- roll. The GM rolls 1d6 and gets a 3. So, after Chang Li's period of instruction concludes, he must spend 3 weeks using Acrobatics and practicing his moves; then his roll rises to 14-.

If a teacher has Instructor, then he can teach the Skill to any level of ability (*i.e.,* any Skill Roll), even if that roll is better than his own roll in the Skill — he knows how to bring out the best in his students. For Skills that don't involve rolls, a character with Instructor can teach the Skill in any amount or value. For example, a character with Defense Maneuver II and Instructor could teach another character any level of Defense Maneuver, even up to III or IV. (The GM may forbid this, if appropriate and desireable.)

Learning from a teacher takes the normal amount of time for learning Skills in the game (see below). At the GM's option, the use of Instructor may reduce or increase the time needed to learn a Skill; see below.

SELF-TEACHING

A character may not always have access to a teacher for a Skill he wants to learn. In that case he has to resort to teaching himself from books, scrolls, instructional videos, friendly ghosts living in crystal balls, computer files, or any other source of information available to him.

With self-teaching, the main issue for the GM to resolve is the accuracy and completeness of the source(s) of information the character has access to. A character with a well-stocked library about, say, Lockpicking can learn just about all the tricks of the trade; one with just a book or two may only be able to learn a small part of the information and abilities the Skill covers. The table on page 28 ranks sources of information by quality, indicating the maximum roll the character can acquire via self-teaching and how long it takes him.

If a character has multiple sources of information, the GM should apply a quality rating to them as a whole, not rank each source individually. However, the worst rating a "library" can have is that of the best book in it; a large number of Poor quality sources of information don't render a High quality source less helpful.

As with learning from a teacher who doesn't have the *Instructor* Skill, a character who self-teaches himself from a low-quality source may not be able to acquire the full roll he would normally get based on his applicable Characteristic. For example, a character with DEX 20 who teaches



himself Contortionist from an Average quality book can only gain an 11- roll, even though his DEX would indicate a 13- roll. In this case, after spending his full 3 Character Points on the Skill, the character still has some learning to do. He must spend 1d6 months using and practicing the Skill on at least a weekly basis; at the end of this period, his roll rises to Characteristic-based. (The GM may change this period if he wishes; another option is for the character to make 2d6 legitimate uses of the Skill during game sessions.)

INTELLIGENCE ROLLS

The rules for learning Skills set forth above don't require any rolls on the part of the character doing the learning — since he's spending the Character/Experience Points for the Skill, he's going to acquire it one way or another. Gamemasters desiring greater "realism" may want to factor a character's learning ability into play. Whenever a character wants to learn a Skill, have him make an INT Roll. If the roll succeeds, he learns the Skill in the normal time set by the rules and the GM. (If he succeeds by a large margin, particularly a Critical Success, the GM may reduce the time appropriately.) If he fails, increase all times listed in the rules (or set by the GM) by 10% per point the roll failed by.

Time To Learn A Skill

Of even more importance to many characters is how long it takes them to learn a Skill. Sometimes this becomes a factor in an adventure or campaign — can a character learn a particular Skill quickly enough to use it to thwart his enemy?

In game terms, the time to learn a Skill boils down to how frequently characters can spend Experience Points on a Skill, and how many points they can spend at a single time.

BASIC LEARNING TIME RULES

The GM has to establish the basic time required to learn Skills in the campaign, based on how "realistic" he wants to be. In campaigns with a more cinematic or fantastic bent, the GM should set low periods for how often characters can spend Experience Points on a given Skill. (During character creation, when characters spend Character Points, it's assumed the expenditure represents time and effort spent training prior to the beginning of the campaign, so these rules only refer to Experience Points.) Some possibilities include:

Once Per Adventure Or Game Session

Rather than keep track of the passage of time in the campaign, the GM can simply rule that characters can spend Experience Points on a given Skill once per game session — or perhaps once per adventure, if the characters' escapades usually require two or more game sessions to complete. This is a simple rule, easily remembered and applied, but its artificiality may prove frustrating. Why should it take characters longer to learn a

SELF-TEACHING

Quality/Accuracy Of Information	Maximum Roll	Learning Time
Extremely High	16-	x0.8
Very High	14-	x1
High	12-	x1
Average	11-	x1
Poor	10-	x1.3
Very Poor	8-	x1.5
Extremely Poor	6-	x2

Maximum Roll: After self-teaching himself a Skill, the character acquires this roll or the roll derived from his relevant Characteristic, whichever is *less.* See the text for further information.

Learning Time: This multiplier applies to the time the GM establishes for learning Skills; see the text. For example, if the GM rules it takes 1d6 months to learn a Characteristic-Based Skill and he rolls a 3 (three months), then a character who teaches himselrf from a Poor quality source of information takes (3 x 1.3 =) 3.9 months to learn the Skill.

Skill during a game session that covers two weeks of campaign time than in one when the adventure only takes one day of game time?

If the GM chooses this option, he should also indicate *when* characters can spend Experience Points. He may want all expenditures to take place at the end of the game session or adventure, at the same time when characters earn Experience Points. Or he may let characters spend Experience Points at the beginning of game sessions or adventures, so they have access to the Skill during the game. Some GMs may even allow characters to spend Experience Points at any time during an adventure — even, if necessary, in mid-scene!

Once Per Day

Some GMs restrict characters to spending Experience Points on a given Skill once per day (campaign time, not real world time). This is more "realistic" than the once-per-game-session method, but not so restrictive that characters can't pick up new Skills fairly quickly.

Once Per Week, Once Per Month

For GMs who find that "once per day" results in characters learning Skills too quickly to suit the campaign, once per week may work better (again, this is campaign time, not real world time). If even that's too much, once per month may do the trick. Longer time periods are likely to result in so much player frustration that they're not worth it.

Per Amount Of Training

Rather than establish rigid time period requirements, some GMs prefer to base characters' ability to spend Experience Points on a given Skill on how much training time they put in. In this case, the GM establishes a number of hours (or days) of training required before a character can spend points on a particular Skill. The character can perform this training in large blocks of time, or in one-hour increments here and there as his adventures allow. That way a character who really immerses himself in studying can pick up a new Skill pretty quickly compared to one who studies it as a hobby or in his spare time.

Example: *The GM in a Pulp Hero campaign might rule that characters can only spend Experience Points on a Skill after spending 6 hours in training. Randall Irons wants to learn Tracking, a Skill he's found himself in need of on several wilderness adventures. Meanwhile, his friend and sometime rival Hamilton Cross decides to study art history.*

Irons contacts some hunter friends of his and asks them to teach him the basics of following and reading tracks. They head out into the woods, and after a grueling six-hour day, Irons knows enough to spend Experience Points on Tracking.

Cross, on the other hand, doesn't have a big chunk of time to devote to his studies; he's got people to meet, places to go, and things to do. He can only spend one hour a day reading about art history. Therefore it takes him nearly a week to accumulate the six hours of training he needs to be eligible to spend Experience Points on KS: Art History.

To make things less predictable, the GM may introduce a random element into the training time calculation. For example, maybe a character has to spend 1d6+3 hours of training to spend Experience Points on a Skill. The GM would roll once for each Skill a character wanted to learn, reflecting the fact that the character picks up some abilities quicker than others based on innate talent, aptitude, and the like.

AMOUNT OF POINTS SPENT

Related to the issue of how often characters can spend Experience Points to learn Skills is how many points they can spend at once on a given Skill. Being able to spend three or more points on a Skill means characters can often acquire a full-blown Skill "instantly"; being able to spend only one or two points at a time means the learning process takes much longer. Typically the longer the period of time between opportunities to spend points, the more points characters can spend at once, but this doesn't always hold true.

Some possibilities include:

1 Experience Point At A Time

The slowest rate is 1 Experience Point at a time. This ensures that characters learn Skills slowly but steadily, which may seem properly "realistic" for many campaigns because it reflects a gradual learning process.

For example, suppose a character wants to learn Computer Programming. The first time he gets to spend Experience Points on it, he spends 1 point; that means he now has a Familiarity (an 8- roll) with the Skill. After he spends the second point, the GM might invoke the optional rule on page 14 and give the character an 11- Advanced Familiarity with Computer Programming. When he spends that third and final point, he has the full INT-Based roll for the Skill.

2 Experience Points At A Time

This rate allows characters to advance more quickly than one at a time — but still prevents a

character from learning a Characteristic-Based Skill all at once. Instead, he has to spend 2 Experience Points one time, and 1 point later on, to have the full roll.

3 Experience Points At A Time

At this rate, characters can buy an entire Characteristic-Based Skill at one time. This makes a lot of sense in campaigns where the GM requires long periods of time between opportunities to spend points, and even for some "dramatic" games that use shorter periods. But it may not be appropriate for more "realistic" games.

More Than 3 Experience Points At A Time

In some truly fantastic, over-the-top campaigns, GMs let characters spend four, five, or more Experience Points on a given Skill at once. This usually leads to rapid Skill advancement (possibly even to characters buying all-new Skills in midgame), and may cause game balance problems in some campaigns.

SKILL LEARNING CATEGORIES

Instead of establishing one blanket rule for all Skills, the GM could assign Skills to different categories — Easy, Moderate, and Difficult to learn — and vary the time required to spend Experience Points, and/or the amount of points characters can spend at once, for each category. The accompanying table provides an example of such a system, but GMs are free to change it to suit their particular preferences, campaigns, or settings.

THE INSTRUCTOR SKILL

If the GM uses the *Instructor* Skill (page 362) in the campaign, it affects how quickly characters learn Skills.

Instructor And Learning Time Period

For every point by which a teacher with Instructor succeeds with his Skill Roll, the time period for the student (*i.e.,* the character who wants to spend Experience Points to learn a Skill) to spend points on the Skill is reduced by ten percent (10%), with a maximum reduction of fifty percent (50%) of the normal time required. For example, if the GM only allows characters to spend Experience Points on a given Skill once per week, and a character's Instructor makes his roll by 3, he reduces the time period by 30% — to a little less than five days.

On the other hand, poor teaching can make it harder to learn. For every point by which the teacher fails his Instructor roll, increase the learning time by ten percent (10%).

Instructor And Experience Point Expenditure

Alternately, or in addition, Instructor may increase or decrease the amount of Experience Points a character can spend at once. For every 3 full points by which the character with Instructor makes his roll, increase the number of points the character can spend by 1 (thus, +1 Experience Point if the teacher makes his roll by 3-5, +2 if by 6-8, and so on). On the other hand, for each 3 full points by which the teacher misses the roll, reduce the number of Experience Points the student can spend by 1 (usually to a minimum of 1 point).

SKILL LEARNING CATEGORIES

Easy: Breakfall, Bureaucratics, Climbing, Concealment, Conversation, Fast Draw, Interrogation, Knowledge Skill, Language, Lipreading, Rapid Attack, Riding, Stealth, Teamwork, Transport Familiarity

Moderate: Acrobatics, Acting, Animal Handler, Autofire Skills, Bribery, Bugging, Combat Driving, Combat Piloting, Contortionist, Cramming, Deduction, Gambling, High Society, Mimicry, Navigation, Oratory, Paramedics, Persuasion, Power, Professional Skill, Science Skill, Seduction, Shadowing, Sleight Of Hand, Streetwise, Survival, Tactics, Tracking, Trading, Two-Weapon Fighting, Ventriloquism, Weapon Familiarity

Difficult: Analyze, Combat Skill Levels, Computer Programming, Criminology, Cryptography, Defense Maneuver, Demolitions, Disguise, Electronics, Forensic Medicine, Forgery, Inventor, Lockpicking, Martial Arts, Mechanics, Penalty Skill Levels, Security Systems, Skill Levels, Systems Operation, Weaponsmith

Easy: Characters may spend 1 Experience Point per day or per game session (whichever is less) on these Skills

Moderate: Characters may spend 1 Experience Point per week on these Skills

Difficult: Characters may spend 1 Experience Point per two weeks on these Skills

Improving Existing Skills

Although the rules for learning Skills only refer to learning new Skills, they also apply to improving existing Skills — spending Experience Points to buy up a roll or adding to the categories the character can affect with his Skill, for example.

The GM may impose other restrictions on improving known Skills if he wishes. For example, he might rule that a character cannot spend points to improve his roll with a Skill until the character legitimately uses that Skill in a game session. "Legitimately" means during an adventure for the purpose of moving the adventure forward; the GM should not let a character concoct a half-baked excuse for using a particular Skill just so he can spend Experience Points to improve it.

Skill Atrophy

The opposite of learning a new Skill is letting Skills the character already knows deteriorate from lack of use — *Skill atrophy.* Gamemasters interested in maintaining a "realistic" feel to their campaigns may want to adopt these optional rules to reflect the fact that a character forgets things and becomes less adept at his learned abilities if he doesn't practice and "keep his hand in."

For every six months (two Seasons) that a character does not make use of a Skill, he loses 1 Character Point of effect from it. If he's spent points to improve the Skill's roll, he loses those

LEARNING MULTIPLE SKILLS AT ONCE

The rules in this section apply only to "a given Skill," meaning to one particular Skill that a character wants to learn. But unless the GM rules otherwise, there's no reason a character can't try to learn two or more Skills at once — assuming he has the Experience Points and time to spend. Thus, a character who has 4 Experience Points to spend could put 1 point in each of four Skills during a given learning period, 2 points each in two Skills, or any other combination that follows the GM's rules about the number of points a character can spend on a given Skill at a time and during a given time period.



points first, until he has just a plain Characteristic-bsased roll. When he loses points from a 3-point Skill, it becomes an Advanced Familiarity (page 14) at 2 points, then a Familiarity at 1 point (even if it's an Everyman Skill). When he has 0 points in it, he can only use the Untrained Skill Use rules (page 18) with that Skill. For Skills bought in increments without rolls, such as Combat Skill Levels, Cramming, Defense Maneuver, or Martial Arts, a character has to lose an entire increment's worth of points before losing all use of that part of the Skill. The character may choose which part or increment of the Skill he loses first, unless logic dictates otherwise (for example, with Defense Maneuver, a character should always first lose the highest level he currently knows).

"Keeping in practice" means the character must spend at least one uninterrupted day per month studying and practicing with his Skill. In most cases, proper study and practice requires the character to have access to a laboratory, research library, practice room, or like facility with a roll equal to or greater than his own in the Skill he wants to maintain, but the GM may waive this requirement if appropriate. Frequent use of the Skill "in the field" (*i.e.,* during adventures) can take the place of practice; the GM decides what constitutes "frequent use."

Regaining Atrophied Points

The loss of one or more points from a Skill isn't necessarily permanent. To regain a lost point, a character must spend time intensively re-training himself back to peak ability. This requires one uninterrupted week per point lost. The character must do this within two years of losing the point. If he does not, the loss becomes *permanent;* after that, the only way to regain the lost point is to spend an Experience Point to make up for it.

SKILL MODIFIERS



Skill Modifiers are bonuses or penalties imposed by the GM on a Skill Roll. They reflect the ease of the task being attempted, the equipment available to the character, the time taken to perform the Skill, the circumstances, and many other factors. All Skill Modifiers change the number the character needs to roll, not the dice roll itself (thus, a positive modifier, like +2, is good because it increases a character's Skill Roll; a negative modifier, like -3, is bad because it reduces the roll; this also applies to the character's Skill Levels and any Complementary Skills). The GM should provide modifiers to deal with each situation that comes up in the course of the game. Most Skills are very general — they cover a variety of situations — so the circumstances can affect the chance of success tremendously.

Modifiers are important not only for the game-based benefits they provide, but because they help players visualize the situation their characters are in. "Okay, the door is locked, make a Lockpicking roll to get in" is a rather dull description of what is going on in the game. It's a lot more exciting and visual to say, "All right, the door has a magnetic lock on it. It looks tough. There's a -4 to your Lockpicking roll to get inside." By determining what modifier he wants to apply and describing the scene accordingly, or by thinking about what the scene looks like in advance and determining what modifiers it entails, the GM can provide more detail about his world and the game, making it more fun for everyone.

SKILL MODIFIERS

Modifier	Circumstance
+3 to +5	Routine
+1 to +3	Easy
-1 to -3	Difficult
-3 to -5	Extremely Difficult
-5 or more	Sheer Folly
See text	Preparing for extra time
+1 to +3	Character has extensive knowledge of the object of the Skill Roll
+1 to +3	Character roleplays the use of the Skill well
+1 to +3	Character uses good equipment in connection with the Skill Roll
+1 to +3	Excellent conditions for performing the Skill
-1 to -5	Poor conditions for performing the Skill
-1 to -5	Extremely strange or weird object to perform the Skill on
-1 to -5	Character uses poor equipment, or lacks the proper equipment (if appropriate)
-1 to -3	Combat conditions, for Skills not normally used in combat

THE EFFECTS OF SKILL MODIFIERS

Before you assign a Skill Modifier, you should be aware of how severely it may affect a character's Skill Roll. Due to the bell curve nature of the *HERO System* task resolution system (see page 6), even a small modifier can significantly change a character's percentage chance to succeed or fail, particularly if the base roll is at or near the midpoint of the curve (*i.e.,* 11-). Conversely, for characters with really high or really low Skill Rolls, even a large modifier may not reduce their chance to succeed or fail very much. The accompanying tables show the effects of modifiers on a character's chance to succeed with a Skill Roll.

ROLEPLAYING AND SKILL MODIFIERS

Additionally, Skill Modifiers can encourage creativity and good roleplaying on the part of the players. Players sometimes go through a lot to earn a positive Skill Roll modifier. For example, roleplaying a character's efforts to obtain better lockpicking equipment makes a great scene in a game — or might even be the goal behind an entire scenario. A character who doesn't want to suffer a negative modifier can get very creative in his attempts to overcome it. For example, he might take apart his watch to obtain a few tiny pieces of wire to replace the lockpicks his captors just took from him.

Any player can just amble through the game by saying, "Oh, okay, it's a lock, I'll use my *Lockpicking* Skill, are there any modifiers?" This lackadaisical approach means the player misses out on a lot of fun and doesn't contribute to the game as much as he could. Players who take an active role, who describe what their characters do with their Skills and how they try to overcome negative modifiers, should be rewarded for enhancing the game — they should get positive modifiers or more opportunities to surmount poor circumstances.

AMOUNT OF MODIFIER

Because the Extraordinary Skill rules use a -10 penalty as the definition for "Extraordinary" Skill use, most GMs (and most of the rules in this book) cap the value of any single Skill Modifier at -9 (though multiple modifiers that all apply to a Skill at once can exceed -9). However, in a few exceptional cases modifiers greater than -9 are allowed; in this case, the GM may want to change the Extraordinary Skill modifier for that Skill to make it at least 2 points worse than the largest single modifier described for that Skill.

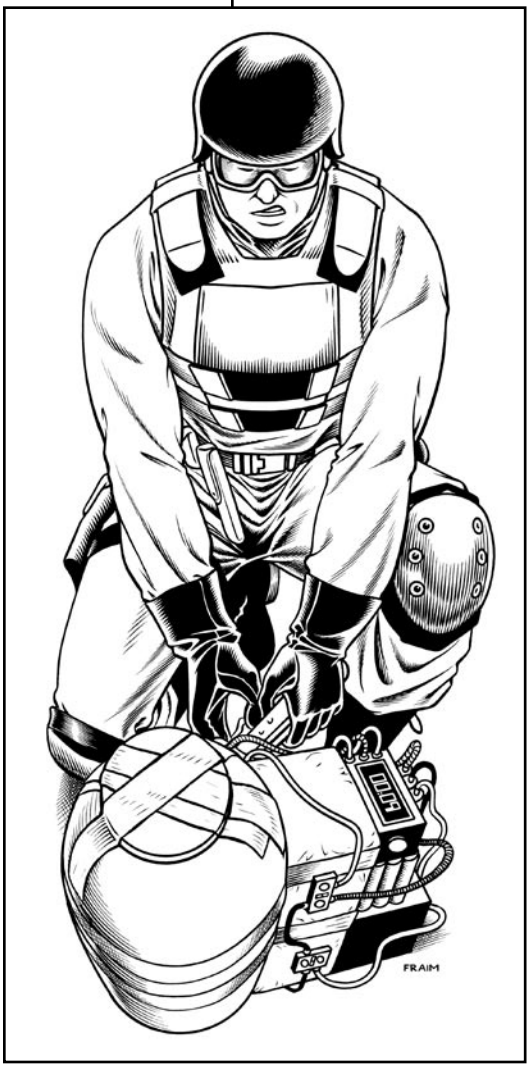
MODIFIER EFFECTS

Roll	-4	-3	-2	-1	+0	+1	+2	+3	+4
3	0.46%	0.46%	0.46%	0.46%	0.46%	1.85%	4.63%	9.26%	16.20%
4	0.46%	0.46%	0.46%	0.46%	1.85%	4.63%	9.26%	16.20%	25.93%
5	0.46%	0.46%	0.46%	1.85%	4.63%	9.26%	16.20%	25.93%	37.50%
6	0.46%	0.46%	1.85%	4.63%	9.26%	16.20%	25.93%	37.50%	50.00%
7	0.46%	1.85%	4.63%	9.26%	16.20%	25.93%	37.50%	50.00%	62.50%
8	1.85%	4.63%	9.26%	16.20%	25.93%	37.50%	50.00%	62.50%	74.07%
9	4.63%	9.26%	16.20%	25.93%	37.50%	50.00%	62.50%	74.07%	83.80%
10	9.26%	16.20%	25.93%	37.50%	50.00%	62.50%	74.07%	83.80%	90.74%
11	16.20%	25.93%	37.50%	50.00%	62.50%	74.07%	83.80%	90.74%	95.37%
12	25.93%	37.50%	50.00%	62.50%	74.07%	83.80%	90.74%	95.37%	98.15%
13	37.50%	50.00%	62.50%	74.07%	83.80%	90.74%	95.37%	98.15%	99.54%
14	50.00%	62.50%	74.07%	83.80%	90.74%	95.37%	98.15%	99.54%	100.00%
15	62.50%	74.07%	83.80%	90.74%	95.37%	98.15%	99.54%	100.00%	100.00%
16	74.07%	83.80%	90.74%	95.37%	98.15%	99.54%	100.00%	100.00%	100.00%
17	83.80%	90.74%	95.37%	98.15%	99.54%	100.00%	100.00%	100.00%	100.00%
18	90.74%	95.37%	98.15%	99.54%	100.00%	100.00%	100.00%	100.00%	100.00%

The "+0" column indicates the chance to succeed with an unmodified roll. Remember that in the HERO System, a roll of 3 always succeeds, and a roll of 18 always fails, unless the GM rules otherwise, or a specific rule indicates a different result.

GENERAL MODIFIERS

You can apply general Skill Modifiers to any Skill that has a roll (though certain Skills may not use some of these modifiers). They include the following:



EASE OF THE TASK

Some tasks are easy, others are nearly impossible, and the GM should use positive and negative modifiers to reflect this. Most tasks are "average," meaning there's no modifier at all, but during an adventure, circumstances often arise that are far from average. In some cases, a more precise type of Skill Modifier (*e.g.,* broken or lost equipment) covers the specific type of difficulty in a situation, so you should use that modifier instead; "ease of the task" modifiers are the most general and vague type of Skill Modifier the GM can apply.

The descriptions of the Skills in Chapter Two of this book provide examples of tasks characters might attempt with each Skill, with appropriate modifiers you can analogize to the "ease of the task" modifiers presented here. However, no list of circumstances can cover everything that might occur during a game, so the GM must make the final determination of how easily a character can perform a particular task.

GENERAL CONDITIONS

The general conditions under which a character uses a Skill can also affect his chances of success. The GM assesses the general conditions, then consults the accompanying table for the appropriate modifier. As with ease of the task, these are general and vague modifiers that may be replaced by more precise modifiers when appropriate... but they're more likely to be cumulative with other modifiers than ease modifiers are.

Excellent And Poor Conditions

Depending on the Skill, "Excellent Conditions" may include things like very good weather, having plenty of time, being in a comfortable situation, and so forth. "Poor Conditions" are the opposite — lousy weather, discomfort, being pressured/subjected to stress, and the like.

Strange Or Weird Subject

Performing Skills upon objects or subjects that are extremely strange, weird, or unusual

EASE OF TASK MODIFIERS

Difficulty Category	Modifier
Routine	+3 to +5
Easy	+1 to +3
Average	+0
Difficult	-1 to -3
Extremely Difficult	-3 to -5
Sheer Folly	-5 to -10 (or more)

In the case of "Routine" and "Easy" tasks, don't forget that in ordinary situations, when a character's under no stress or pressure and has sufficient time to perform a task correctly, there's no need to make a Skill Roll — just assume he succeeds. See page 11 for further discussion.

imposes penalties of -1 to -5 to the Skill Roll. See page 39 for more specific rules regarding unusual technologies, and the Paramedics description in Chapter Two about using that Skill on someone of another species.

Extensive Knowledge

Characters who have "extensive knowledge" of the object or subject of their Skill Roll receive a positive modifier. A good example would be a group of commandos sent to defuse a terrorist's bomb. Experts have briefed them in advance on the type of bomb the terrorist usually uses and how to defuse it. If the experts' information is correct, the commandos receive a bonus for having extensive knowledge of the situation. The GM should *not* grant an extensive knowledge bonus because a character knows a lot of related or similar Skills; that's what the Complementary Skill rules are for. (However, in some situations a character may use Cramming to obtain an obscure Knowledge Skill solely for the purposes of reflecting "extensive knowledge," and this is perfectly appropriate.)

Combat Conditions; Time/Deadline Pressure

In some cases, trying to use a Skill in combat conditions, or other high-stress crisis situations, imposes a -1 to -3 penalty on the Skill Roll.

The following Skills are intended for use in combat conditions, or can be used in combat with no penalty, and therefore characters receive no negative modifiers for using them in combat: Accurate Sprayfire, Acrobatics, Analyzes related to combat situations (Analyze Style, Analyze Combat Technique, and the like), Breakfall, Combat Driving, Combat Piloting, Concentrated Sprayfire, Fast Draw, Rapid Attack, Rapid Autofire, Skipover Sprayfire, Stealth, Tactics, Two-Weapon Fighting, and Weapon Familiarity. All other Skills are *not* normally used in combat conditions — even Skills often associated with combat situations, such as Demolitions, typically aren't intended for use when the character is under attack. Characters using those Skills in combat suffer a negative modifier determined by the GM. Characters may buy the Talent *Combat-Ready* (see page 54) for a Skill to eliminate any combat conditions penalties.

Similarly, characters who are under some sort of time or deadline pressure or similar forms of stress (the bomb is going to explode in six seconds, only have one hour to write a 5,000-word story) suffer a negative modifier to their Skill Rolls.

Stealthy Skill Use

Characters have trouble performing Skills if they try to be stealthy while doing so. Characters may not be able to use some Skills in a stealthy fashion at all; the GM determines this on a case-by-case basis. If stealthy use is possible, the character must make a Stealth roll at -2 (or worse, at the GM's discretion) to perform the task stealthfully. If he fails the roll he can still attempt to use the Skill, but others can perceive him doing so as usual.

DAMAGE TO SUBJECT MODIFIERS

Damage	Modifier
Less than 1/3 BODY	-0
1/3 to 2/3 BODY	-2
More than 2/3 BODY	-4
Significant damage	Additional -1 to -3

GENERAL CONDITIONS MODIFIERS

Condition	Modifier
Excellent Conditions	+1 to +3
Poor Conditions	-1 to -5
Extremely Strange/Weird Subject of Skill	-1 to -5
Extensive Knowledge of Subject of Skill	+1 to +3
Combat conditions	-1 to -3
Time/deadline pressure	-1 to -2
Being stealthy	Requires Stealth roll at -2 or worse

DAMAGE TO SUBJECT

If the object the character is using his Skill — a lock he's trying to open with Lockpicking, and engine he's trying to fix with Mechanics, a broken radio he's trying to make a last-ditch Systems Operation roll with — has suffered damage, it's harder for him to succeed. (The same applies with Paramedics and similar Skills based on the subject's degree of injury.) The accompanying table lists the standard modifiers in this situation.

"Significant" damage is damage to a specific part of the subject, or a specific type of damage, that the GM deems particularly relevant or necessary for the Skill used or task attempted. For example, if a character has to pick a lock, and parts of the lock have been fused together by fire damage, the GM might consider that "significant" damage and tack on an additional -2 penalty to the roll. Significant damage penalties are cumulative with other damage modifiers.

At the GM's option, damage to the subject may not affect some Skills or Skill uses. For example, damage to parts of a radio might not penalize a character who wants to use that radio to jam another radio's signal. Similarly, they may not apply to attempts to repair the damage.

EQUIPMENT

Many Skills, like Lockpicking and Demolitions, almost always require some type of equipment to perform. With the right, or right type of, equipment, a character may find his task easier to perform (or at least *possible* to perform). On the other hand, using poor-quality, improvised, or damaged equipment probably makes his job tougher, if not impossible. The accompanying table has suggested modifiers for equipment quality. As noted in some of the individual Skill descriptions in Chapter Two, equipment modifiers differ slightly for some Skills (for example, equipment modifiers are changed a little for Climbing; see page 109). Chapter Three has more information on equipment for Skills.

"Improvised" equipment includes makeshift, jury-rigged, and other less-than-perfect forms of equipment used when nothing better is available. Determining which types of equipment are Poor, Very Good, and so forth is left to the GM's discre-

EQUIPMENT MODIFIERS

Type Of Equipment	Modifier
None	Cannot perform Skill
Very Poor	-4 to -6 or more
Very Damaged	-4 to -6 or more
Poor and Improvised	-4 to -6 or more
Poor, Improvised, or Damaged	-1 to -3
Average	+0
Good	+1 to +2
Very Good	+3 to +4
Extremely Good	+5 or more

INJURY MODIFIERS

Degree Of Injury	Modifier
Less than ⅓ BODY	-0
⅓ to ⅔ BODY	-2
More than ⅔ BODY	-4
Significant injury	Additional -1 to -3

tion — unless, of course, the character has paid Character Points for better-than-average equipment, in which case he's entitled to the bonuses he paid for. You can use the guidelines in this table when deciding how to build quality equipment. For example, if a character wants "very good" lockpicks, he should buy them as a +3 (or greater) bonus to Lockpicking. (See *Skill Kit* on page 385.)

Buying Equipment

If a Skill requires equipment, unless stated otherwise in the Skill's writeup it's not necessarily assumed that the character gets the needed equipment for "free," because he may have to pay money for it in the game or the like. But he doesn't have to pay a separate Character Point cost for the equipment (unless, as noted above, he's buying a particularly good form of equipment defined in rules terms).

In some cases a character may want "concealed" versions of standard equipment, such as a set of lockpicks built into what looks like a ballpoint pen, or a listening device that looks like a coin. Generally, there's no need to pay Character Points for this sort of equipment — it's something the GM allows as part of the campaign that characters can purchase with money. However, concealable equipment may cost much more than ordinary equipment since it's usually harder to manufacture, illegal to own, or the like. If the GM absolutely insists on having characters pay Character Points for concealable/disguised standard equipment, buy it this way: Relevant Skill 8- (1 Active Point); IAF (-½) (total cost: 1 point) (alternately, a character can buy a *Concealment* Skill for his equipment). The character uses his own Skill Roll, not that of the gear; the "roll" simply indicates which Skill the equipment is intended for.

MOVEMENT MODIFIERS

Movement This Phase	Modifier
Half Move (under own power)	-2
Full Move (under own power)	Cannot perform any Skills unless permitted by GM
In smooth-riding vehicle/mount	-1 to -2
In rough-riding vehicle/mount	-2 to -5

In campaigns that stress "realism," the GM may want to significantly increase these penalties (say, by another -2 to -4 each).

INJURY

At the GM's option, it's harder for a character to perform most Skills when he's hurt. The penalties in the Injury Modifiers table reflect this. This modifier works best in more "realistic" games, like some Dark Champions or Low Fantasy games; it's usually not appropriate (or at most applies to some lesser degree) in more cinematic campaigns.

A "significant" injury is one to any part of the body, or a specific type of wound, that the GM deems particularly necessary for the Skill used or task attempted. For example, a character who's received an injury to his hand may suffer additional penalties to Skills such as Lockpicking and Demolitions, and in some cases an injury caused by, say, acid may affect a character more strongly than a wound from a punch or knife. Significant injury penalties are cumulative with other injury modifiers.

At the GM's option, injuries may not affect some Skills. For example, Knowledge Skills and uses of other Skills that simply reflect knowing something often ignore injury penalties (unless the injury is to the head).

MOVEMENT

At the GM's option, characters in motion — who move during the same Segment when they want to use a Skill — have a more difficult time performing many Skills, whether they're moving under their own power or are in a moving vehicle, as indicated by the Movement Modifiers table. Generally this only applies to Skills that require rolls; it doesn't affect a character's ability to allocate his Combat Skill Levels, Penalty Skill Levels, or Skill Levels, shout a command in a learned Language, to use Rapid Attack or Two-Weapon Fighting, or the like. At the GM's option, it also does not apply, or applies at a lesser level, to Skills that inherently involve some movement, such as Breakfall or Acrobatics. (See *Stealth* for specific rules for that Skill.)

SKILL PERIOD

As discussed on page 10, the Skill Table assigns every Skill to one or more *Skill Periods,* which define the genres and eras for which those Skills are appropriate (roughly speaking). Characters are typically trained in how to use a Skill based on their native period/genre; if they try to use a Skill as it would be used in an earlier or later period, they suffer penalties. This most often applies to technology-oriented Skills; the same problems may apply to non-technical Skills, but this is less common. (See also the *Technology* modifiers, described below.)

A Fantasy-era character who has the opportunity to use Skills from later periods often suffers a Skill Roll penalty of -3 to -5 for dealing with Modern situations, -5 to -8 for Future.

A Modern character trying to use his Skills in Fantasy era situations (for example, to use Security Systems, which he learned to defeat electronic burglar alarms, to neutralize a trapdoor), or in Future eras where he may not completely understand

what's going on, suffers Skill Roll penalties of -2 to -4. On the other hand, a Modern character applying Modern knowledge, techniques, and perhaps even technology to a Fantasy-era problem (perhaps because he's traveled back in time) may receive a +2 to +4 bonus to reflect his more expansive abilities — thanks to his greater knowledge, he can easily resolve problems that frustrate Fantasy characters.

Future characters trying to use their Skills in Modern settings or with Modern technologies may suffer Skill Roll penalties of -2 to -4; the penalty increases to -5 or greater in Fantasy eras. These penalties may instead become bonuses if the character applies his Science Fiction knowledge, techniques, and perhaps even technology to earlier-period problems that would baffle the people of that time due to lack of knowledge or the like.

Expanding Skill Period Modifiers

For some campaigns (such as time traveling games, or games where the characters frequently explore ancient ruins), the GM may want greater granularity in the Skill Period rules. The accompanying table lists ten time periods, defined roughly by genre, organized in descending order from earliest to latest (sort of like a "Time Chart for history"). For every step up or down the chart from a character's native period (*i.e.,* every step backward or forward in time), he suffers a cumulative -2 penalty on Skill use. (As noted above, when a character applies his Skill to problems from an earlier time period, sometimes the GM may convert this into a bonus instead if a character's greater degree of knowledge would prove unusually helpful.)

Using these rules may make things much more difficult for the PCs. For example, a character trained in how to set up and defuse modern-day security systems may have a lot of trouble trying to disarm a collapsing pit trap from Babylonian times — it's not nearly as much within his field of knowledge.

The GM can increase this to -3 per step for greater "realism," or decrease it to -1 for more cinematic games. Similarly, he can alter the penalty for more sophisticated technology (*i.e.,* technology from periods down the chart from what the character's used to) if he thinks the increased "user friendliness" of the advanced tech would help the character. And in some cases he may want to decrease the penalty generally; sometimes the gulf of time doesn't matter much if a problem involves relatively simple equipment or can be solved through careful application of reason and logic.

(Note: The Skill descriptions in Chapter Two often include period-by-period notes on applications and restrictions on the Skill. These notes usually just refer to the broad periods of "Fantasy" and "Science Fiction" instead of breaking those categories down as this table does.)

EXPANDED SKILL PERIOD MODIFIERS

Fantasy — Ancient (up to 500 AD)
Fantasy — Medieval (501-1399)
Fantasy — Renaissance (1400-1599)
Age Of Reason/Piracy/Sail (1600-1849)
Western/Victorian (1850-1913)
Pulp (1914-1939)
Modern-Day (1940-2020)
Science Fiction — Near Future (2021-2299)
Science Fiction — Far Future (2300-2699)
Science Fiction — Very Far Future (2700 and later)

ROLEPLAYING

When a player roleplays the use or performance of a Skill well, his character should receive a +1 to +3 bonus to his Skill Roll.

TIME

Taking more or less time than normal can affect Skill Rolls.

Taking Extra Time

First, and most commonly, a character who takes extra time to perform a Skill gets a positive modifier. This is because he's taking his time, being extra careful, analyzing the situation thoroughly, and so forth. For every step down on the Time Chart *beyond the Base Time for the Skill,* the character gets +1 to his Skill Roll. (See page 23, and each Skill's description in Chapter Two, regarding Base Times for Skills.)

Example: *The Base Time for using Acrobatics is, at most, a Half Phase. Nighthawk wants to attempt a particularly difficult leap-flip-grab the ledge maneuver so he can sneak into Green Dragon's hideout without being seen. Because it's a difficult maneuver, the GM rules that Nighthawk suffers a negative modifier of -2 to his Acrobatics roll. Nighthawk spends 1 Minute studying the layout of the location, his approach, and other factors. By spending this extra time (1 Minute is two steps down on the Time Chart from 1 Phase, the closest Base Time on the Time Chart), Nighthawk gets a +2 positive modifier to his Skill Roll, effectively negating the penalty for the difficulty of the maneuver.*

Example: *The Base Time for performing Paramedics is 1 Turn. Drago has been hurt in combat and Freda decides to use Healing (the* Fantasy Hero *form of Paramedics) to prevent the wound from getting worse. She spends 1 Minute cleaning the wound, applying bandages, and so forth. Because 1 Minute is one step down the Time Chart from the Skill's Base Time of 1 Turn, Freda gets a +1 to her Paramedics roll to determine if she successfully helps Drago's wound heal properly.*

Performing Skills More Quickly Than Normal

Second, characters can try to perform a Skill more quickly than normal — either to impress onlookers, or because there's some sort of deadline involved ("You've only got ten seconds to defuse the bomb, McCarrigan. No pressure, buddy"). For each step up on the Time Chart *beyond the Base Time for the Skill,* the character suffers a -3 penalty to his Skill Roll. (At the GM's option, if a Skill takes a Full Phase to perform, a character can perform

TIME CHART (EXPANDED)

Time Period/Duration
1 Segment
1 Phase
1 Turn (Post-Segment 12)
1 Minute
5 Minutes
20 Minutes
1 Hour
6 Hours
1 Day
1 Week
1 Month
1 Season (3 months)
1 Year
5 Years
25 Years
1 Century
5 Centuries
2,500 Years
10,000 Years
50,000 Years
250,000 Years
1 Million Years
5 Million Years
25 Million Years
100 Million Years
500 Million Years
2.5 Billion Years
10 Billion Years
50 Billion Years

it in a Half Phase at a -3 penalty [and possibly as a Zero Phase Action at a -6 penalty]; a Skill that normally takes a Half Phase can, with the GM's permission, be performed as a Zero Phase Action for a -3 penalty. However, in no case can a character use a Skill against another character in any way as a Zero Phase Action.)

Example: *McCarrigan has to defuse a booby-trapped bomb before it explodes — and the timer says there's only ten seconds left! Unfortunately, the GM rules that defusing a bomb with a booby trap of this complexity would normally require 20 Minutes. McCarrigan only has a Turn (ten seconds is a little less than a full Turn, but it's close enough for the GM). 1 Turn is three steps above 20 Minutes on the Time Chart, so McCarrigan's going to suffer a -9 penalty to his Demolitions roll. Good luck....*

To overcome this problem, a character can buy Skill Levels for the specific purposes of counteracting this penalty. The *Rapid Tasks* ability on page 104 of *The Ultimate Speedster* (or page 207 of *The UNTIL Superpowers Database*) is an example, though you may want to alter the type of Skill Level purchased if you're building a more specific power. If the GM considers this cost-prohibitive, he may want to reduce the penalty for performing Skills more quickly than normal (to, say, -2 per step up the Time Chart), or he could let any character use the Rapid Tasks power for free if he succeeds with a Speedster Tricks roll (or other appropriate *Power* Skill roll).

In "realistic" campaigns, characters who try to perform tasks at high speed may run into a problem: the equipment they need to use the Skill, or the medium upon which they practice the Skill, can't withstand the force of their speed! This is particularly likely to happen to comic-book speedsters in *Champions* campaigns. For example, it doesn't matter how fast a speedster can type commands into a computer if the keyboard breaks after just a few seconds of ultra-fast keying. Speedsters may also have problems with equipment that's deliberately designed to slow people down, such as anti-hacking computer software that only allows the input of so many possible passwords in a given amount of time. The GM can simulate these difficulties by imposing additional penalties on the Skill Roll, having the speedster's powers automatically do a certain amount of damage to equipment he uses, or the like.

MODIFIERS FOR SKILL CATEGORIES

The following modifiers apply to Skills of a particular category, such as Agility Skills or Interaction Skills.

Agility Skill Modifiers

The following modifiers apply to all Agility (*i.e.,* DEX-based) Skills.

ARMOR

In campaigns where characters frequently wear "realistic" armor (*e.g., Fantasy Hero* games), some GMs prefer to impose specific penalties for wearing armor instead of counting the armor as part of the character's overall load for Encumbrance purposes. *Fantasy Hero* discusses this on pages 196-97.

ENCUMBRANCE AND BULKINESS

It's much harder to perform Agility Skills when the character carries more than he comfortably can. Consult the Encumbrance Table on page 379 of the *HERO System 5th Edition, Revised* and apply the listed "DEX Roll" penalty to all Agility Skills.

Furthermore, particularly bulky or awkward burdens might impose additional penalties. A "Bulky" load — including any Focus with the *Bulky* Limitation, a large television set or appliance, pieces of furniture, and the like — would impose another -1 penalty. A "Very Bulky" load — especially bulky or awkward loads, such as an injured or unconscious person or a keg of ale — entails an additional -2 penalty.

NOT USING HANDS

Agility Skills normally require the use of the hands — but sometimes a character can't use his hands for some reason (they're tied up, broken, can't reach the object to be manipulated, or the like). A character can attempt to perform an Agility Skill with his mouth at a -5 penalty, or his feet/toes at a -8 penalty. The GM may adjust these penalties based on the situation. A character who buys his legs and/or mouth as Extra Limbs suffers no penalties for performing Agility Skills with them.



Intellect Skill Modifiers

The following modifiers apply to all Intellect (*i.e.,* INT-based) Skills. See also *Perceptive Skills,* below, since many Intellect Skills require a character to perceive something.

REFERENCE MATERIALS

For many Intellect Skills, one of the most useful pieces of equipment a character can have is *reference materials* — books, pamphlets, computer databases, and other sources of information characters can look to for the details. For example, even the most most competent user of Mechanics can't remember every single one of the literally tens of thousands pieces and spare parts he might need to use. He's an expert not only because he knows about more of them than the average mechanic, but because he knows when and where to look up more information in a technical manual or parts catalog.

You can use the Equipment modifiers (see above) to represent the quality of the reference materials available to a character when he's using a Skill. Alternately, characters can buy a particularly useful reference source as a bonus to a Skill on a Focus; a library of reference materials might qualify as a "laboratory" in a Base instead, allowing characters to use its Skills as Complementary Skills (see Chapter Three).

Interaction Skill Modifiers

The following modifiers apply to all Interaction (*i.e.,* PRE-based) Skills.

ALIENNESS

In some settings, characters of one species (or race) have difficulty interacting with characters of any other species — something about the "alien" nature of other species makes it hard to relate to them. Sometimes this phenomenon depends on "classes" of aliens; a mammalian species might relate just fine to any other mammalian species, but reptilian or ichthyoid species give it the willies. This trait is most common in Low Science Fiction, Low Fantasy, or "realistic" settings; it almost never exists in Space Opera Science Fiction, Pulp Science Fiction, or High Fantasy, where dozens of alien species or fantastic races mingle freely together.

To reflect this discomfort, GMs can impose a penalty on all Interaction Skill rolls between members of two different species: -2 for relatively similar species; -4 for dissimilar species; and -8 (or more) for greatly different species (like a physical being and an energy being).

APPROPRIATENESS

Interaction Skills are particularly limited by the appropriateness of the situation. Trying to use Persuasion on an enemy in the middle of a battle, bribe someone while lots of people are watching, or the like is almost certainly doomed to failure. It's not necessarily impossible — after all, the *HERO System* is about dramatic action, and sometimes heroes can do some bizarre and spectacular things

if fortune favors them — but it's difficult (-4 or greater penalty, typically).

On the other hand, sometimes a particular Interaction Skill is especially appropriate for the situation at hand. Usually this doesn't merit any bonus, but sometimes the GM provides a small one (+1 or +2).

EFFECTIVE COMELINESS MODIFIERS

Effective COM	Modifier
23+	+3
18 to 22	+2
13 to 17	+1
8 to 12	+0
3 to 7	-1
2 to -2*	-2
-3 to -7	-3
-8 to -12	-4
-13 to -17	-5
-18 or worse	-6

*: Penalties for negative COM may convert to corresponding bonuses when a character's use of an Interaction Skill involves fear or intimidation.

EFFECTIVE COMELINESS

As noted on page 48 of the *HERO System 5th Edition, Revised* rulebook, characters can sometimes make COM Rolls as Complementary Skill Rolls for Interaction Skills. However, in some instances it may be easier to apply a flat modifier based on the effective COM of the character. "Effective" COM means the character's COM in the particular situation involved, based on the GM's evaluation of the factors involved. For example, a rather plain or ugly character (COM 6) may look a lot better if he's cleaned up and wearing a tuxedo (giving him an effective COM of 8). A character may ordinarily be rather beautiful (COM 18) but be particularly dishevelled or unattractive in a particular situation. Or he could have some feature the subject of the Interaction Skill finds particularly unappealing (*e.g.,* big, puffy, collagen-enhanced lips), thus reducing the character's effective COM. The accompanying table lists the modifiers.

PRESENCE ATTACKS

In many cases the GM can use appropriate modifiers listed under Presence Attacks in the main rulebook as modifiers to Interaction Skill rolls by converting the number of dice into a penalty. For example, a +2d6 modifier equals a +2 Skill Roll modifier (or a -2 EGO Roll modifier). (But see below regarding Psychological Limitations.)

Alternately, the GM can allow a character to make a Presence Attack as a sort of "Complementary Skill Roll" to an Interaction Skill. The GM determines what level of Presence Attack a character would have to achieve to get the results the character wants from using his Interaction Skill. He then makes a Presence Attack, roleplaying it if appropriate (and perhaps to obtain bonus dice!). For every 5 points by which the roll exceeds the target number, the character gets a +1 bonus on his Interaction Skill roll.

PSYCHOLOGICAL LIMITATIONS

A character's ability to use Interaction Skills successfully on a target depends in part on the target's Psychological Limitations. Some Psychological Limitations make one or more Interaction Skills easier to use on a target; some make it harder. For example, a character who is *Greedy* may be more susceptible to Bribery. A character who's a *Skirt-chaser* or *Lustful* probably gives in to Seduction and similar Skills quicker than one who's taken a *Vow Of Chastity.* Modifiers from Psychological Limitations depend on the intensity of the Disadvantage, as indicated by the accompanying table.

Caveat: the Interaction Skill Effects Table on page 65 uses Psychological Limitation values as a "benchmark" indicating how much a character must make an Interation Skill Roll by to affect the target. If the GM uses that rule, he should not also apply Psychological Limitation modifiers unless he feels it's particularly appropriate to do so.

PSYCHOLOGICAL LIMITATION MODIFIERS

Intensity And Nature Of Disadvantage	Modifier
Moderate, in favor of Skill use	+1
Moderate, opposed to Skill use	-1
Strong, in favor of Skill use	+2
Strong, opposed to Skill use	-2
Total, in favor of Skill use	+3
Total, opposed to Skill use	-3

RESISTANCE AND REPUTATION

The *Reputation* Perk and *Resistance* Talents, on pages 83-84 and 90, respectively, of *The HERO System 5th Edition, Revised,* can provide direct bonuses or penalties to Interaction Skills generally (or to a specific Interaction Skill in the case of Resistance and its kin).

ROLEPLAYING

More than any other type of Skill, Interaction Skills can benefit from good roleplaying... or suffer from bad roleplaying. The GM should consider granting an extra bonus of +1 to +3 for good roleplaying of an Interaction Skill, or a similar penalty if the character doesn't try to roleplay it at all or does so badly.

Of course, "good" or "bad" roleplaying can be a relative thing, and in general GMs shouldn't penalize characters because their players aren't as good at something as the character himself should be. Players don't have to be crack marksmen to buy Combat Skill Levels, martial artists to buy Martial Arts, or pilots to buy TF: Small Planes for their characters, so they shouldn't have to be socially adept or sophisticated to buy and use Interaction Skills. But since any player can talk and act, as long as a player makes at least *some* reasonable effort to roleplay what his character does, that should suffice to at least prevent a penalty (even if it's not enough to get a bonus).



Perceptive Skill Modifiers

The Perception Roll modifiers on pages 353-54 of *The HERO System 5th Edition, Revised* apply to "Perceptive Skills" — that is, Skills involving perception or analysis of phenomena, such as Criminology, some aspects of Bugging and Mechanics, Lipreading, or Tracking. Typically this means perception with Sight, but in some cases other Senses may be involved.

For example, if a Skill requires a character to read or observe something (a book or scroll, a radar screen, a speaker's lips...), then the modifiers for darkness, shadow, and lighting apply to the Skill Roll. After all, it's kind of difficult to read a book in pitch-black conditions! The same applies to trying to see something over a long distance (*i.e.,* in game terms, the Range Modifier applies) or hear something in a noisy room.

If it's impossible for a character to use a particular Sense (usually because Darkness or a Flash have "blinded" him or block his Sense entirely), he cannot use Perceptive Skills based on that Sense.

Technological Skill Modifiers

"Technological Skills" refers to Skills that involve working with particular types of equipment. Examples including Computer Programming, Demolitions, Electronics, Lockpicking, Mechanics, Security Systems, and Systems Operation. The Skill Modifiers for equipment almost always apply to these Skills (many of which cannot be performed without the right tools or gear).

Rather than use the general Skill Period rules discussed above, technology-heavy games may prefer a more precise system of Skill modifiers based on technological advancement and compatability.

Gamemasters who establish a system of "technology levels" may use it to determine Skill Roll penalties. *Star Hero* discusses the concept of tech levels in detail on pages 142-47 (the use of "tech levels" is assumed in the discussion below). The following rules are taken from that text, but GMs may want to refer to *Star Hero* for further information on establishing a system of tech levels for their games.

OBSOLETE AND ADVANCED TECHNOLOGY

Often technologies introduced at an earlier tech level remain in use for long periods. Humans in the early twenty-first century still use automatic pistols designed before 1900 (and still manufacture some, with minor improvements). Axes and hammers are among the earliest known tools, and are still available at the hardware store. In general, characters suffer no penalty using (relatively) simple equipment from an earlier tech level, particularly if that equipment is still generally in use in their society or is highly similar to common technology. There are exceptions to this: some technologies become so obsolete that characters accustomed to a more advanced tech landscape are completely unfamiliar with them. Firemaking is a good example — until the invention of matches just about everyone could kindle a fire with flint and steel; now it's something to study in wilderness-survival courses or historical reenactment workshops. Forgotten tech imposes a minimum -3 Skill Roll penalty, or the GM may not allow the character to make a roll at all. (For more cinematic games, the GM can reduce the penalty to -2 or -1.)

Advanced technology is much harder to use. The standard skill penalty is -3 for each Tech Level beyond that with which the character is familiar. (If you're not using a Tech Level system, assume a -3 penalty for each step down on the Expanded Skill Periods Modifier table.) But this applies only to equipment based on understandable principles — an Industrial-Age steam engineer trying to fix an Atomic Age chemical rocket motor, for example. If the technology involves new concepts unknown to the low-tech person, there's an additional -5 penalty (though the GM may wish to cap the overall penalty for technological unfamiliarity at -10). Thus, a steam engineer would be at -8 to fix a nuclear power plant, because the whole phenomenon of nuclear fission is outside his worldview. Characters can use the *Cramming* Skill

ADVANCED, OBSOLETE, AND ALIEN TECH MODIFIERS

Skill Roll Modifier	Situation
-3 per Tech Level difference	Working with Advanced Tech
-5	Working with advanced tech using unknown principles
-3	Working with forgotten tech
+3 per Tech Level difference	For high tech versus low tech contests
+5	For high tech with new principles versus low tech contests
-1 to -5	Working with sufficiently alien technology

As always, the GM can alter any of these modifiers based on the situation, the type of technology involved, the task being attempted, or to make the rules more "realistic" or "cinematic."

to quickly familiarize themselves with local technology. (If appropriate, the GM can reduce these penalties for cinematic campaigns.)

The modifiers work in reverse when characters use high-tech skills and knowledge against low-tech equipment — like a computer hacker breaking into an obsolete system or a weapon officer on a modern warship trying to hit a target with old-fashioned countermeasures. Advanced tech gets a +3 bonus per Tech Level of difference, with an additional +5 if the high-tech equipment uses principles unknown to the builders of the low-tech target. (Of course, these bonuses don't apply if the high-tech character is trying to use older tech he's not familiar with; see above.)

ALIEN TECHNOLOGIES

Characters may also run into tech level-related problems when they encounter technology that's highly different from what they're used to. Typically this means technology from other worlds or dimensions, but in some time periods and places it's possible this could apply between two groups of humans from wildly different societies. In a Fantasy campaign it might involve the technologies used by two different humanoid races. Maybe the alien devices and systems require a different size, type, or arrangement of hands than the character's, involve senses the character lacks, or are simply so *different* that the character can't fully or properly comprehend them.

At the GM's discretion, a character dealing with sufficiently alien technology suffers a -1 to -5 Skill Roll penalty. Over time, this penalty may diminish for a specific character as he becomes accustomed to the odd tech, or a character can eliminate the penalty altogether by having a KS or PS in the alien technology on at least an 11- roll.

What constitutes "sufficiently alien" is up to the GM. In a setting that mixes and mingles a wide variety of sentient humanoid species, they may all be able to use each other's technology (or the tech may automatically adapt itself to the species of the user). Large galactic federations and empires automatically spread technological knowledge among their citizens (unless they want to keep them ignorant for purposes of repression). On the other hand, a secretive alien species may refuse to teach anyone about its tech.

TECHNOLOGY COMPATABILITY

Gamemasters and characters may also have to deal with situations where technology created by different species doesn't work together well. If the PCs' ship has a Human-built hyperdrive thruster, a D-coil manufactured by the Perseids may not quite fit or work right. A group of characters could easily find itself in the frustrating situation of having access to plenty of spare parts... that don't work with their equipment!

In this situation, GMs have to decide on the relative compatability of two species' technology, using the following classifications:

Fully Compatible: The two species's tech is totally compatible; it works together automatically, without the need for Skill Rolls.

Mostly Compatible: The two species's tech is largely, but not entirely, compatible. Typically characters have to make an appropriate Skill Roll at -2 to get the two types of tech to function together properly. Even then, there may be a loss of 2-12% efficiency (measured in terms of dice/points of effect, Active Points, or the like, as chosen by the GM).

Partly Compatible: The two species's tech is sometimes compatible, sometimes not. Typically characters have to make an appropriate Skill Roll at -4 to get the two types of tech to function together properly. Even then, there is definitely a loss of 4-24% efficiency, and possibly as much as 10-60% efficiency.

Barely Compatible: The two species's tech works together properly only on rare occasions. Typically characters have to make an appropriate Skill Roll at -8 to get the two types of tech to function together properly. Even then, there is definitely a loss of 10-60% efficiency, and possibly as much as 40-90% efficiency.

Incompatible: The two species's tech is not compatible in any way, and cannot be made to work together at all (or, at best, could only work together for a short period of time if the character makes an Extraordinary Skill roll).

EVERYMAN SKILLS



Everyman Skills are Skills every character knows, typically on an 8-. They vary by genre, and sometimes also by other considerations (culture, religion, and the like), as discussed below. The GM must determine what the Everyman Skills are for the game he intends to run; the lists below provide suggestions, but the GM should alter them to suit his own particular campaign, setting, and preferences.

All the lists below, no matter what the genre, include Acting, Climbing, Concealment, Conversation, Deduction, an AK, two KSs, a native Language, Paramedics, Persuasion, one PS, Shadowing, and Stealth; most have one TF as well. These represent abilities every character possesses to some degree. Although they're not listed, if necessary you can assume that every character also has CuK: Character's Native Culture, KS: General Knowledge, and PS: Perform Basic Chores And Menial Tasks as Everyman Skills on an 11- each.

SELLING BACK EVERYMAN SKILLS

Sometimes a player conceives of a character who should have fewer Everyman Skills than normal, or even no Everyman Skills at all. For example, a "boy raised by wolves" in a modern-day campaign might not have Conversation, Paramedics, Persuasion, TF, or a Native Language. In game terms, such a character sells back some of his Everyman Skills, just like a lame character would sell back some of his base 6" of Running. Each Everyman Skill sold back is worth 1 point (even the KS and PS on an 11-).

If a character sells back an Everyman Skill, he can later buy that Skill, but with a restriction. The intent of the "selling back" rule for Everyman Skills, generally speaking, is that the character isn't ever going to have that Skill. If he later decides he wants it, he must pay the standard cost for the Skill, *plus* 1 Character Point to balance out the point savings he previously acquired. Otherwise he could acquire the Skill for a net cost of 2 Character Points.

PURCHASING EVERYMAN SKILLS

If a character wishes to purchase a Skill he already has as an Everyman Skill (such as Stealth), he must pay the full point cost for the Skill — he doesn't get a 1-point savings because he already knows the Skill on an 8- as an Everyman Skill. The GM may, at his discretion, change this rule so characters do receive the 1-point savings (a particularly appropriate "house rule" for campaigns in which characters are built on a small number of points).

EVERYMAN SKILLS, SKILL LEVELS, AND SKILL MODIFIERS

Since Everyman Skills are Familiarities, characters cannot apply Skill Levels (including Overall Skill Levels) to increase the roll. The exceptions to this are the KS and PS at 11-, to which characters can apply Skill Levels as appropriate. Additionally, if the character buys bonuses to a Skill with a Limitation (such as +2 to Stealth, Only In Woodland Environments), he may apply those bonuses to his Everyman Skill unless the GM rules otherwise, since they're not Skill Levels *per se*.

Everyman Skill rolls can be modified, just like a purchased Skill's roll can be. For example, a character using his Everyman Skill in Climbing to climb a tree receives a bonus to his roll if the tree has lots of branches that make it easy to climb.

SUBDIVIDING LANGUAGE

Every Everyman Skill group includes the character's native Language at the 4-point level (idiomatic, native accent). But some characters grow up or live in places or homes where they could conceivably learn to speak more than one Language, such as a bilingual household or a nation with three or four official languages. At the GM's option, instead of taking all 4 Character Points' worth of his Everyman Language in one Language, a character can split them up among two to four Languages (possibly more, if the GM uses the "Basic Words" level of fluency; see page 213). For example, a Fantasy character with a Human mother and Elven father might put 2 points in Vestrian (his mother's Human language) and 2 in Elvish; a character growing up in Switzerland might put 2 points in German, 1 point in French, and 1 point in Italian; a Quebecois character might split his points between French and English.

CREATING EVERYMAN SKILL LISTS

For ease of campaign creation and play, GMs may wish to use the generic Everyman Skills lists provided below. But creating one or more campaign-specific lists of Everyman Skills can enhance the individuality of the campaign, and may even allow the GM to better differentiate characters from different backgrounds.

The question then becomes: on what basis should the GM construct an Everyman Skill list? Should a list depend on where a character was raised, or by whom, or on some other factor? Some possibilities include:

Culture: Since culture can vary tremendously even within a given race or region, some GMs may want to devise Everyman Skill lists based on cultural types. Using this method, the GM establishes a framework of universal Everyman Skills that *every* character has, plus lists of additions or changes based on specific cultures. Thus, people who come from a Riding Nomad culture would have Riding or TF: Horses as an Everyman Skill, while those who come from a people dependent upon fishing, water trade, or the like would have a TF in some type of watercraft. (For example, a modern-day inhabitant of Venice might not have TF: Small Motorized Ground Vehicles; instead, he might have TF: Small Motorized Boats.) If the cultural differences aren't great, the GM can simply raise this issue if someone wants to create a character from an unusual culture. If the differences between major cultures are significant, as in some *Fantasy Hero* games, the GM should generate a list of Everyman Skills for each culture before the game begins.

Kingdom Or Nation: If the nations, kingdoms, or other governmental entities in a setting are sufficiently distinct, the subjects/citizens of each one may have their own Everyman Skill lists (though again, some Everyman Skills, like Stealth, would occur everywhere). Residents of the Free City of Tavrosel might have Survival (Urban), while the subjects of the mountainous realm of Valicia have Survival (Mountains), and the subjects of the Hargeshite Empire of Vashkhor all learn KS: Hargeshite Religious Doctrine during childhood.

Race Or Species: A popular choice for many *Fantasy Hero* campaigns is to base Everyman Skills on race, effectively making them Everydwarf, Everyelf, and Everygoblin Skill lists (though some Skills, such as Deduction, occur in every race's list). Similarly, in *Star Hero* games, each sentient species may have its own list (Everymartian Skills, for example).

The Race/Species approach works particularly well in games where each race follows distinct, well-defined stereotypes. Thus, dwarves might all have PS: Blacksmith, PS: Stonecraft, and Survival (Mountains), while all elves have Survival (Temperate/Subtropical Forests) and Tracking. A character raised by a race other than his own would take that race's Everyman Skill list. For example, a dwarf raised by humans wouldn't have Blacksmith as an Everyman Skill.

Region: Since kingdoms and nations can be big or small, some GMs prefer to create Everyman Skill lists based on region or geography instead. Coastal peoples have TF: Small Wind-Powered Boats, arctic ones have TF: Skiing, peoples living in inhospitable regions have an appropriate *Survival* Skill, and so forth.



Religion: If religion plays a dominant role in the campaign world, adherents of different religions may have distinct Everyman Skill lists. At the very least, the GM should add KS: [Religion's] Doctrines And Practices to the Everyman Skill list, allowing characters to define exactly which religion they grew up in.

CATEGORIZED SKILLS AS EVERYMAN SKILLS

In some campaigns or settings, the GM may want to make a Skill like Animal Handler, Forgery, or Survival — a Skill bought in categories, in other words — an Everyman Skill. In this case, each character receives an 8- roll with one category worth up to 2 Character Points (such as Card Games for Gambling, or Equines for Animal Handler). He can choose a 1-point subcategory if he prefers.

EVERYMAN SKILL LISTS BY GENRE

Here are suggested Everyman Skills for the major genres (and, if appropriate, their subgenres).

CYBERPUNK/NEAR FUTURE

Acting; Climbing; Computer Programming; Concealment; Conversation; Deduction; AK: Home City *or* Cyberspace; KS of player's choice 11-; KS of player's choice 8-; Native Language (4 points' worth; includes literacy); Paramedics; Persuasion; one PS at 11- (job, hobby, or other area of interest); Shadowing; Stealth; TF: Small Motorized Ground Vehicles

DARK CHAMPIONS

You can apply this list to modern-day games in general.

Acting; Climbing; Concealment; Conversation; Deduction; AK: Home country or region; KS of player's choice 11-; KS of player's choice 8-; Native Language (4 points' worth, with literacy); Paramedics; Persuasion; one PS at 11- (representing the character's job, hobby, or the like); Shadowing; Stealth; TF: Common Motorized Ground Vehicles

FANTASY

Fantasy is a sufficiently broad genre that the possibility exists for multiple Everyman Skill lists, based on the type or nature of the campaign. You can always default to the Generic Fantasy list if you prefer.

Generic Fantasy

Acting; Climbing; Concealment; Conversation; Deduction; AK: Home country or region; KS of player's choice 11-; KS of player's choice 8-; Native Language (4 points' worth, no literacy); Paramedics (Healing); Persuasion; one PS at 11- (a character's job, hobby, or the like); Shadowing; Stealth

Viking/Northern European Fantasy

Acting; Climbing; Concealment; Conversation; Deduction; AK: Viking Lands; KS of player's choice 11-; KS of player's choice 8-; Native Language (4 points' worth, no literacy); Paramedics (Healing); Persuasion; one PS at 11- (representing the character's job, hobby, or the like); Shadowing; Stealth; TF: Large Rowed Boats (or other appropriate 1-point TF, such as Chariots for an Irish-style campaign)

Cloudrider Fantasy

This Everyman Skill list is for a Fantasy culture in which the inhabitants live in giant airships or on gigantic flying beasts of some kind.

Acting; Climbing; Concealment; Conversation; Deduction; AK: The World; KS of player's choice 11-; KS of player's choice 8-; Native Language (4 points' worth, no literacy); Navigation (Air); Paramedics (Healing); Persuasion; one PS at 11- (representing the character's job, hobby, or the like); Shadowing; Stealth; TF: Airships (or other appropriate 1-point TF)

High Fantasy

This Everyman Skill list is for a Fantasy setting in which magic is so common that all characters know about it to some degree; as an option the GM might add a *Magic* Skill roll and/or a few points' worth of general utility spells.

Acting; Climbing; Concealment; Conversation; Deduction; AK: Home country or region; KS of player's choice 11-; KS of player's choice 8-; KS: Magic 8-; Native Language (4 points' worth, no literacy); Paramedics (Healing); Persuasion; one PS at 11- (a character's job, hobby, or the like); Shadowing; Stealth

MARTIAL ARTS

The Everyman Skill list for a *Ninja Hero* campaign usually depends on the game's setting and time period. A game taking place in medieval China would use a Fantasy list, whereas one set in the modern day would use the Dark Champions list. In some martial arts campaigns, where it seems that literally everyone has fighting skills, the Everyman Skill list might even include a few points' worth of Martial Maneuvers (if so, this constitutes an exception to the normal rule that a character has to buy a minimum of 10 points' worth of Martial Arts).

POST-APOCALYPTIC

Acting; Climbing; Concealment; Conversation; Deduction; AK: Home City or Region; KS of player's choice 11-; KS of player's choice 8-; Native Language (4 points' worth; no literacy); Paramedics (or Healing); Persuasion; one PS at 11- (job, hobby, or other area of interest); Shadowing; Stealth; Survival; TF: Small Motorized Ground Vehicles *or* Riding Animals (choose one 1-point subcategory)

PULP

Acting; Climbing; Concealment; Conversation; Deduction; AK: Home country or region; KS of player's choice 11-; KS of player's choice 8-; Native Language (4 points' worth, with literacy); Paramedics; Persuasion; one PS at 11- (representing the character's job, hobby, or the like); Shadowing; Stealth; TF: Common Motorized Ground Vehicles (at the GM's option, characters growing up in rural areas may substitute some other appropriate vehicle or riding animal instead)

SCIENCE FICTION

Different styles of Science Fiction campaigns have different Everyman Skill sets. Listed below are suggested Skill sets for various types of *Star Hero* campaigns; see that book for more information about each type of Science Fiction (and see above for Cyberpunk campaigns).

Hard SF

Acting; Climbing; Computer Programming; Concealment; Conversation; Deduction; AK: Home Planet; KS of player's choice 11-; KS of player's choice 8-; Native Language (4 points' worth; includes literacy); Paramedics; Persuasion; one PS at 11- (job, hobby, or other area of interest); Shadowing; Stealth; TF: Small Motorized Ground Vehicles *or* Hovercraft *or* Personal-Use Spacecraft

Low SF

Acting; Climbing; Computer Programming; Concealment; Conversation; Deduction; AK: Home Planet; KS of player's choice 11-; KS of player's choice 8-; Native Language (4 points' worth; includes literacy); Paramedics; Persuasion; one PS at 11- (job, hobby, or other area of interest); Shadowing; Stealth; TF: Small Motorized Ground Vehicles

Military SF

Acting; Climbing; Computer Programming; Concealment; Conversation; Deduction; AK: Home Planet; KS of player's choice 11-; KS of player's choice 8-; Native Language (4 points' worth; includes literacy); Paramedics; Persuasion; one PS at 11- (job, hobby, or other area of interest); Shadowing; Stealth; TF: Small Motorized Ground Vehicles *or* Hovercraft *or* Personal-Use Spacecraft

Space Opera

Acting; Climbing; Computer Programming; Concealment; Conversation; Deduction; AK: Home Planet, Star System, or Sector; KS of player's choice 11-; KS of player's choice 8-; Native Language (4 points' worth; includes literacy); Paramedics; Persuasion; one PS at 11- (job, hobby, or other area of interest); Shadowing; Stealth; TF: Hovercraft *or* Personal-Use Spacecraft

SUPERHEROES

Acting; Climbing; Concealment; Conversation; Deduction; AK: Home country or region; KS of player's choice 11-; KS of player's choice 8-; Native Language (4 points' worth, with literacy); Paramedics; Persuasion; one PS at 11- (representing the character's job, hobby, or the like); Shadowing; Stealth; TF: Common Motorized Ground Vehicles

WESTERN

Acting; Climbing; Concealment; Conversation; Deduction; AK: Home country or region; KS of player's choice 11-; KS of player's choice 8-; Native Language (4 points' worth, no literacy); Paramedics (possibly Healing for Indian characters); Persuasion; one PS at 11- (representing the character's job, hobby, or the like); Shadowing; Stealth; TF: Horses

VICTORIAN

Acting; Climbing; Concealment; Conversation; Deduction; AK: Home country or region; KS of player's choice 11-; KS of player's choice 8-; Native Language (4 points' worth, with literacy); Paramedics; Persuasion; one PS at 11- (representing the character's job, hobby, or the like); Shadowing; Stealth; TF: choose a 1-point TF appropriate to character's background or upbringing

EVERYCREATURE SKILLS

Just like human characters have Everyman Skills, animals have Every*creature* Skills — the basic Skills that just about every animal needs to survive and thrive. Every animal has a Familiarity (8- roll) with the following Skills:

Analyze Animal; Concealment (to hide self only); Language (see text); Shadowing; Stealth; Survival (home environment); AK: home territory or region; PS: [Specific Animal] Abilities.

Analyze Animal represents an animal's instinctive capacity for judging the strength of other animals relative to itself. For example, this Skill tells a young male wolf when it's time to challenge the alpha male of the pack for domination, and when the leader remains too strong for it to defeat.

Concealment typically represents an animal's ability to hide itself, not other objects, so it often has the *Self Only* (-½) Limitation (though some animals do have a normal *Concealment* Skill). Some animal abilities, like camouflage, may be simulated with bonuses to Concealment or Stealth; if so, the animal may apply those bonuses to its 8- Familiarity roll if it doesn't have the full Skill.

The *Language* ability listed represents the animal's capacity to communicate with others of its own kind. Among some animals, such as apes or whales, this Language is fairly sophisticated (enough for humans to perceive and study), but among most species it's a very basic, simplistic, and even instinctual thing. Of course, in some *Fantasy Hero* campaigns and other games, some animals can speak normal languages; if so, they buy that ability with Character Points.

The *PS: [Specific Animal] Abilities* Skill represents various minor or lesser abilities all members of a given species possesses. Examples include some fishes' ability to return to the place they were born to spawn, some birds' instinct to fly south for the winter without getting lost, or a raccoon's ability to use its dexterous paws to open simple containers.

Additionally, some animals have Everycreature Skills specific to their species. For example, some humaniform creatures, such as apes, have Climbing as an Everycreature Skill.



EVERYMONSTER SKILLS

Intelligent monsters may have Everymonster Skill lists of their own. Everymonster Skill lists tend to be significantly shorter than those for PCs. The GM may, in his discretion, give monsters a broader selection of Everyman Skills, but only allow them to use those Skills on their home planes, among their own kind, and the like. Similarly, sentient humanoid monsters (like orcs, ogres, and trolls) may have Everymonster lists roughly the same as those for humans living in the same region.

Here are a few example Everymonster Skill lists:

Everydemon Skills

Concealment; Deduction; AK: Hell; Native Language (4 points' worth, with literacy); Stealth

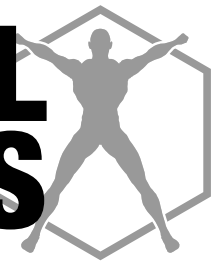
Everydragon Skills

Deduction; AK: Home Region; Native Language (4 points' worth, with literacy); PS: Appraise; Stealth; Survival (home environment)

Everyelemental Skills

Deduction; AK: Home Plane; Native Language (4 points' worth, no literacy)

SKILL ENHANCERS



Skill Enhancers reduce the cost of certain Skills or Perks. Each Skill Enhancer costs 3 Character Points, can only be purchased once, and cannot be increased beyond the basic level. Characters may not purchase Skill Enhancers with Advantages or Limitations (but see below).

The minimum cost of any Background Skill learned through a Skill Enhancer is 1 Character Point, but for that 1 point the character receives an 11- roll. (At the GM's option, a character can instead purchase two 8- Familiarities for 1 Character Point.)

SKILL ENHANCERS TABLE

Skill Enhancer	Affects Skill	Cost
Jack of All Trades	Professional Skills	3/-
Linguist	Languages	3/-
Scholar	Knowledge Skills	3/-
Scientist	Sciences	3/-
Traveler	AKs, CKs, and CuKs	3/-
Well-Connected	Contacts, Favors	3/-

THE ENHANCERS

Here's what each of the Skill Enhancers represents.

JACK OF ALL TRADES

A character with Jack Of All Trades ("JOT") picks up trades, crafts, and similar Skills extremely easily. He learns new Professional Skills at -1 Character Point to the cost.

At the GM's option, a character with JOT may generally have a knack for working with his hands and the like. If he tries to perform such a Skill untrained, he has a 7- roll instead of the usual 6-.

LINGUIST

This Skill Enhancer allows the character to learn new Languages more easily. Linguist decreases the cost of each Language Skill a character buys by 1 point. The minimum cost of a Language is still 1 point, but for 1 point the character can speak a Language at the "fluent conversation" level (which usually costs 2 points).

If a campaign uses the Language Familiarity Chart, its effects are cumulative with the *Linguist* Skill Enhancer. For example, a character who has Danish as a native Language (4 points' worth) and Linguist has 3 Character Points' worth of Swedish and Norwegian for free, instead of the normal 2 points, because the Skill Enhancer effectively gives him another point in each of those Languages for free. The GM may change this rule if appropriate for the campaign or a particular situation.

At the GM's option, a character with Linguist is generally better than average at figuring out what's being said, even in Languages he doesn't understand. In situations where the GM allows characters an INT Roll or the like to understand what's being said or the meaning of some form of communication, a character with Linguist gets +1 to his roll. The GM may also grant this bonus to Universal Translator rolls.

SCHOLAR

The character learns Knowledge Skills easily, at -1 Character Point to the cost, though Scholar doesn't help the character learn AKs, CKs, or CuKs (see *Traveler*). The GM may, in his discretion, forbid characters to buy similar KSs through Scholar (perhaps because they're so unusual, esoteric, rarely taught, or difficult to learn).

At the GM's option, a character with Scholar is generally more learned than the average character. His Everyman Skill with KS: General Knowledge becomes an INT-Based Roll rather than an 11-.

SCIENTIST

The character learns Science Skills easily, at -1 Character Point to the cost. The GM may, in his discretion, forbid characters to buy certain SSs through Scientist (perhaps because they're so unusual, esoteric, rarely taught, or difficult to learn). For example, in a campaign setting where SS: Hyperdrive Engineering is so new that only one or two researchers know it, the GM might rule that all characters have to buy it outside their *Scientist* Skill Enhancer. If and when they're allowed to move that Skill into the Enhancer, if they've spent more than 2 Character Points on it they can, if desired, "sell back" one point so their roll remains the same.

TRAVELER

A character with Traveler is adept at learning about new locations and cultures. He learns new Area Knowledges, City Knowledges, and Cultural Knowledge Skills easily, at -1 Character Point to the cost. However, the character must acquire the knowledge through hands-on experience (*i.e.,* he must actually visit the location).

At the GM's option, a character with Traveler is generally better able to figure out directions and cultural information even for places and cultures he hasn't been thoroughly exposed to. If the GM allows characters an INT Roll or the like to resolve some question regarding these subjects, a character with Traveler receives a +1 bonus.

WELL-CONNECTED

This Skill Enhancer affects the cost of certain Perks, rather than Skills. The character is extremely skilled at making friends and earning favors. He makes Contacts easily, at -1 Character Point to the cost. Characters with Well Connected may also purchase two Favors for only 1 point (thereby halving the cost).

LIMITED SKILL ENHANCERS

Generally a character cannot buy Skill Enhancers with Limitations, so that in effect he receives an increase in the relevant Skill Rolls only in the circumstances defined by the Limitation. However, the GM can permit this if that seems appropriate to him based on common sense, dramatic sense, special effects, and considerations of game balance.

The GM can also permit a character to buy a more tightly-defined form of some Skill Enhancers, such as JOT, for only 2 Character Points. This type of Enhancer would only allow the character to buy the relevant type of Background Skill within a narrow field or defined subject. For example, instead of having JOT, which allows him to buy any sort of PS at -1 point cost, a character might have Construction Worker (which only allows him to buy PSs related to construction work) or Musician (which only allows him to buy PSs related to playing instruments, singing, and the like). Similarly, instead of having Scientist, a character might have Engineer, which only allows him to buy SSs classified under "Engineering" (see Chapter Two).

Other Skill Enhancers

Here are some additional optional Skill Enhancers GMs can use if desired.

EXPERT 

Whereas the standard Skill Enhancers are all restricted by the type of Skill(s) characters can buy through them, Expert is restricted by subject. A character can buy any Language, KS, PS, or SS through Expert, provided they all relate to a subject about which he is an expert or for which he has an innate talent. Examples might include Russia (Language: Russian, KS: Russian History And Culture, AK: Russia, KS: Russian Art And Literature), Serial Killers (KS: Serial Killers And Serial Killing, SS: Psychology/Criminal Psychology, PS: Criminal Profiling), or Electrician (KS: Electrical Systems, PS: Electrician, SS: Electrical Engineering).

Expert costs 3 Character Points and has the same effect as other Skill Enhancers: it reduces the cost of all Skills bought through it by -1 Character Point (minimum cost of 1 point, as always). However, to prevent abuse, the GM may want to require characters to buy a minimum of three Skills through Expert; with fewer than that, it's difficult for a character to argue that he has a thorough, "expert" grasp of all the facets and complexities of a subject.

Expert does not "stack" with other Skill Enhancers, giving two Enhancer cost reductions to a single Skill. If a character buys a Background Skill that could go in more than one Skill Enhancer, he must pick one Skill Enhancer to put a given Skill under, and that's the only one it gets a cost break for.

The GM should examine any purchase of Expert carefully to make sure it fits the character, is properly defined, and won't unbalance the game. Characters should use it to define relatively narrow subjects in which they're extremely well-versed, not treat it as an excuse to save points on any Background Skill they want to have and can loosely link together.

PILOT

A character with Pilot is adept at learning how to drive or pilot vehicles of all sorts: air, sea, and land, even riding animals. He buys Transport Familiarities for -1 point, thus allowing him to buy a 2-point TF category for only 1 Character Point. He may also purchase two 1-point TFs for only 1 point (thereby halving the cost).

Universal "Enhancers" 

One Talent — Universal Translator — could be considered as a sort of "Skill Enhancer," since in effect it lets a character know all the Languages (at least to some degree). Therefore it, and some related optional abilities, are considered here rather than in the Talents section. All of them should be considered "Stop Sign" abilities, since they can cause significant game balance problems in the campaign. They're most suited for cinematic games where the GM wants characters to be broadly competent and not have to worry about having every little Background Skill for every possible situation. In games desiring greater "realism" or precise definition of characters, the GM should forbid them.

UNIVERSAL TRANSLATOR

A character with this Talent can understand any form of communication — from verbal speech, to gestures and body language used as part of a deliberate process of speaking (such as sign language), to written text — and communicate back in a crude fashion.

Using Universal Translator

To use Universal Translator, a character must make an INT Roll. If the INT Roll succeeds, he comprehends what he hears or reads. The GM should impose negative modifiers (-1 to -3) if the language the character tries to understand is extremely different from known forms of communication. Conversely, if he tries to understand a language similar to others he's previously encountered, he gets a bonus (+1 to +3). He can improve his INT Roll by spending more time, as with a Skill Roll.

The Limits Of Universal Translator

Universal Translator allows a character not only to understand speech and speak back, but to write and read as well. But remember, it's a form of



communication, not "know all languages for free." If the character isn't involved in some sort of process of communicating, generally the GM should not allow him to use Universal Translator. This Talent lets a character "understand any form of communication," but the GM should apply any restrictions necessary in the interest of common sense, dramatic sense, and preserving game balance.

In particular, a character with Universal Translator generally cannot:

■ Read/understand encrypted or encoded documents or transmissions (he might understand the literal meaning of the words of a code [as opposed to a cipher], but wouldn't know what they signified)

■ understand or speak to animals (unless animals can routinely speak to humans in the campaign setting)

■ understand or "read" mathematical equations

■ perceive lies or emotions by "reading" body language

■ provide cultural context (for example, the character won't know if a particular word or gesture is considered a gross insult, a proposal of marriage, a combat challenge, or the like in a given culture or society)

■ read or understand symbols, runes, logos, flags, and the like (except to the extent the GM believes those things are intended to "communicate" a specific word or meaning)

■ understand or "read" the sounds made by a modem or like device

Universal Translator isn't restricted to written or spoken languages. It could comprehend (and, in appropriate circumstances, allow the character to respond to) semaphore signals, signal fires or drums, and the like (assuming they're not encrypted or encoded).

Universal Translator only allows a character to understand the current communication; it doesn't automatically allow him to communicate back unless he has the proper physical attributes. For example, if the Butterfly People of Altair "talk" by reflecting sunlight off their wings, a human translator could understand them but couldn't talk back. In addition, Universal Translator only allows a character to translate what he hears or reads, and to make a reasonable response; he doesn't know the language. He always has to make his Universal Translator roll (even for the simplest words), and always has an obvious accent.

Ordinarily, Universal Translator works on languages from all planets, dimensions, and places. If a character's form of Universal Translator only works on certain groups or types of languages (for example, a computerized translation device programmed with all Earth languages, but no languages from other planets), then he may buy Universal Translator with a Limitation (usually -½ to -1).

■ Universal Translator Cost: 20 Character Points for INT Roll, +1 to roll for 1 Character Point (Detect Meaning Of Speech [10 Character Points] + Detect Meaning Of Text [10 Character Points])

OTHER "UNIVERSALS"

It's possible to think of Universal Translator as roughly equivalent to Linguist and 17 Character Points' worth of Languages — which, if chosen properly, would let a character communicate with the vast majority of humanity. The rest of the Languages, which a character will rarely (if ever) need, are "thrown in" for the sake of drama and fun game play.

Taken one step further, that logic can justify the creation of other "Universals" that apply to other types of Background Skills. The GM should consider them carefully before allowing them into his campaign. Since they grant a character access to an enormous body of knowledge, they could easily unbalance some games. Even if the GM allows them in appropriate games — such as a *Pulp Hero* campaign where all the characters are supposed to be universally competent — he may want to restrict them so that each one can only be purchased by one PC. That way having a Universal is a distinctive thing, one of the character's "shticks," not something everybody and his brother has.

If for some reason a character has both a Universal and a Skill Enhancer that pertain to the same type of Skill, their bonuses are not cumulative.

True Jack Of All Trades

A character with this Talent can perform virtually any trade, craft, or other Professional Skill competently, whether it involves building a skyscraper, playing chess, painting a portrait, catching dogs, installing electrical wiring, or anything else.

True Jack Of All Trades costs 20 Character Points. For that cost, the character is assumed to have a roll of 11- in any Professional Skill (though the GM can forbid him to perform certain tasks, or reduce the roll, if appropriate). In some cases the GM may require the character to succeed with an INT Roll, or spend a significant amount of time practicing, before he's qualified to make an unpenalized roll with a specific Professional Skill.

At the GM's option, a character with True Jack Of All Trades can improve his roll at a cost of +1 Character Point for each +1 to the roll. The only Skill Levels that apply to True Jack Of All Trades rolls are Overall Skill Levels and 5-point Skill Levels with All Professional Skills, but the GM can permit other Skill Levels to apply if desired.

Skill Modifiers, including taking extra time to perform a task, apply normally to True Jack Of All Trades rolls unless the GM rules otherwise. In particular, the GM should impose negative modifiers (-1 to -3) if the PS the character tries to use is extremely different from other types of work he's done. Conversely, if he tries to perform a task that's similar to others he's already performed, he gets a bonus (+1 to +3).

Universal Connections

A character with this Talent has friends everywhere — literally. No matter where he goes or what sort of help he needs, he always seems to know "just the right person" to turn to for information or assistance.

Universal Connections costs 20 Character Points. For that cost, the character can make a Contact roll of 11- any time he needs help or information. If the roll succeeds, he knows someone who can help him out; if it fails, he doesn't know anyone (or not the right sort of person), he cannot contact the person he seeks, or his friend can't help him for some reason. The GM should interpret the results for maximum drama and fun.

At the GM's option, a character with Universal Connections can improve his roll at a cost of +1 Character Point for each +1 to the roll. The only Skill Levels that apply to Universal Connections rolls are Overall Skill Levels, but the GM can permit other Skill Levels to apply if desired.

The Contacts met via Universal Connections are standard 11- Contacts; the character doesn't have any special relationship with or hold over them, and they rarely possess significant resources, Contacts, or Skills of their own. However, the GM can create the character's Contacts to suit himself, the adventure, and the campaign, so it's possible the character might know some very influential and powerful people indeed.

Universal Pilot

A character with this Talent knows how to drive or pilot any vehicle. Whether it's a sportscar, submarine, hovercar, airplane, time machine, helicopter, tank, or Class 7-Alpha starship, somehow he instinctively, or through long experience with vehicles of every sort, knows how to start the vehicle, operate its equipment, and steer it.

Universal Pilot costs 20 Character Points. For that cost, a character's considered to have every Transport Familiarity possible in the campaign (though the GM may choose to exclude Riding Animals, and any other category so rare and unusual that he thinks it shouldn't be included). As with Transport Familiarity, the character has an 8- roll for performing dangerous maneuvers (jumps, screeching turns, and so forth), but doesn't have to make rolls to operate a vehicle normally. At the GM's option, a character with Universal Pilot can improve his roll at a cost of +1 Character Point for each +1 to the roll (though the GM should establish some maximum, such as 11-, so Combat Driving, Combat Piloting, and Riding remain viable Skills). No Skill Levels (not even Overall Levels) apply to Universal Pilot rolls unless the GM rules otherwise.

Universal Scholar

A character with this Talent knows something about pretty much everything. His grasp of obscure topics may not be as good as that of someone who's spent a significant amount of time studying them, but he's surprisingly well-informed about even unusual subjects.

Universal Scholar costs 20 Character Points. For that cost, the character has an INT Roll with any Knowledge Skill of the "Average" category (see the Knowledge Skill Category Table on page 21). For every step up or down the table, he suffers a -2 penalty to his INT Roll to know a fact associated with a KS of that category (for example, for a KS pertaining to an Incredibly Broad category, he'd make his INT Roll at -8; for a KS of an Unimaginably Precise category, he'd make an INT Roll at -12).



Of course, the GM can always rule that some facts are so well-known that the character automatically knows them or suffers a lesser penalty, or so obscure and unknowable that a character has to buy a specific KS to know them.

At the GM's option, a character with Universal Scholar can improve his roll at a cost of +1 Character Point for each +1 to the roll. The only Skill Levels that apply to Universal Scholar rolls are Overall Skill Levels and 5-point Skill Levels with All Knowledge Skills, but the GM can permit other Skill Levels to apply if desired.

Skill Modifiers, including taking extra time to perform a task, apply normally to Universal Scholar rolls unless the GM rules otherwise. In particular, the GM should impose negative modifiers (-1 to -3) if the KS the character tries to use has no significant relation to subjects he's previously studied or shown great knowledge of. Conversely, if he tries to answer a question that relates to topics he's already shown knowledge of, he gets a bonus (+1 to +3).

Universal Scientist

A character with this Talent is intimately familiar with the entire realm of Science. His grasp of obscure sciences may not be as good as that of someone who's spent a significant amount of time studying them, but he's surprisingly well-informed about even unusual subjects.

Universal Scientist costs 20 Character Points. For that cost, the character has an INT Roll with any Science Skill of the "Field" category (see the Science Skills Table on page 260). For each step right on the table (Discipline, then Subdiscipline, then Specialty) he suffers a -2 penalty on his INT Roll. Thus, answering a question or performing an experiment that falls into a basic, broad field (such as Biology, Chemistry, Engineering, or Physics) is relatively easy, and one in a discipline (such as Zoology, Nuclear Chemistry, Mechanical Engineering, or Astronomy/Astrophysics) not too difficult (only a -2 penalty). Once a character seeks answers in a subdiscipline (such as Entomology for Zoology) or specialty (such as Apiology or Myrmecology for Entomology), using Universal Scientist becomes harder (-4 and -6, respectively), though by no means impossible. Of course, the GM can always rule that some scientific facts are so well-known that the character automatically knows them or suffers a lesser penalty, or so obscure and unknowable that a character has to buy a specific SS to know them.

At the GM's option, a character with Universal Scientist can improve his roll at a cost of +1 Character Point for each +1 to the roll. The only Skill Levels that apply to Universal Scientist rolls are Overall Skill Levels and 5-point Skill Levels with All Science Skills, but the GM can permit other Skill Levels to apply if desired.

Skill Modifiers, including taking extra time to perform a task, apply normally to Universal Scientist rolls unless the GM rules otherwise. In particular, the GM should impose negative modifiers (-1 to -3) if the SS the character tries to use has no significant relation to subjects he's previously studied or shown great knowledge of. Conversely, if he tries to answer a question that relates to topics he's already shown knowledge of, he gets a bonus (+1 to +3).

Other Ways To Buy Lots Of Background Skills

If Skill Enhancers and Universals still aren't quite what your campaign's looking for, consider these options.

BACKGROUND SKILL MULTIPLIERS

In campaigns where GMs like characters to have a *lot* of Background Skills as a way of differentiating themselves or covering a lot of areas of knowledge within the PC group, Skill Enhancers may not go far enough. Even with the point savings they provide, buying a lot of Background Skills may become prohibitively expensive. This is particularly true if a lot of the Skills are bought mainly to help define the character and will probably never be used — few games require a lot of SS: Evolutionary Biology rolls, after all.

One possible solution for this is to treat Skill Enhancers as "Skill Multipliers." Instead of making the rolls for Background Skills cheaper, a Skill Multiplier lets a character buy a lot of particular type of Background Skill for a low cost. The accompanying table indicates the cost of Skill Multiplier for both an 11- roll or an INT Roll with each Skill (or basic conversation and fluent conversation with Languages). Use the same categories and names for Skill Multipliers as for Skill Enhancers (*e.g.,* the *Jack Of All Trades* Skill Multiplier for PSs; the *Scholar* Skill Multiplier for KSs).

If a character wants to reduce the roll with a particular Background Skill, he can do so (this doesn't count as "selling back" a Skill or provide him with any point savings; it's just a way of better defining the character). If a character wants to improve the roll with a specific Background Skill, he can do so by paying the usual cost. If he wants to improve the roll with a group of the Background Skills he's bought, he should buy Skill Levels.

The GM should carefully monitor the use of Skill Multipliers. They're intended to provide a cost-effective way for characters to buy a lot of obscure Background Skills to better define their non-combat abilities, or in settings and genres where it's appropriate for characters to know lots of Background Skills (like some *Pulp Hero* games). In campaigns where obscure SSs, KSs, and PSs tend to come into play frequently, the GM should increase the cost of Skill Multipliers until they're balanced for the utility they provide.

SKILL MULTIPLIERS TABLE

Cost (11- roll)	Cost (INT Roll)	Number Of Background Skills
2	3	1
4	6	2-3
6	9	3-4
8	12	5-8
10	15	9-16
12	18	17-32
14	21	33-64
16	24	65-125

...and so on

BACKGROUND SKILL TABLES

Several of the Background Skills — particularly Knowledge Skills, Languages, and Science Skills — have detailed rules in Chapter Two that show how one body of knowledge relates to another, or how much a character with Skill X knows about Skill Y. For KS and SS this is done by charting the types of Skills available and then establishing rules for Skill Roll penalties for related or specialized forms of a given Skill; Languages use the Language Familiarity Table.

One way to make Background Skills cheaper is to emphasize the use of these tables and charts by making them easier to use. For example, if you reduce the penalty for taking steps on the Knowledge Skill Categories Table and the Science Skills Table to -1 per step (instead of the standard -2) it becomes much easier for a character to know obscure facts without having to buy a separate Background Skill. For example, by buying just three or four SSs with rolls of 14- (say, Biology, Chemistry, Earth Sciences, and Physics), a character has a 50-90% chance (a 10- to 14- roll) to know the vast majority of scientific facts, even in obscure specialties like Apiology or Micropaleontology. Similarly, the GM can heighten the relationship between Languages so that purchasing just a few gives characters free points or INT Rolls in many others.

BUYING BACKGROUND SKILLS IN MID-GAME

Rather than requiring a character to buy and list every Background Skill he should know (based on his character's history, origin, prior life experiences, and so forth), the GM simply requires him to have a well-defined background that states, in part, the sorts of Background Skills the character has. During character creation, the character pays Character Points for at least a few of these Skills — the ones most central to his character concept, or which the player or GM think are likely to be used in the game frequently. The player then makes sure to always have a few unspent Character Points or Experience Points on hand. During the course of the game, if he encounters a situation where he needs one of the obscure Background Skills that are noted as being "within his character concept" but that he hasn't paid for, he can immediately use his saved points to buy it. After all, according to his character concept he's actually known that Background Skill all along — it's just that until this point in the campaign, there's been no use for it and thus no reason to spend points on it.

In short: if the GM's willing to trust the players not to abuse the privilege, until a Background Skill actually matters for the game, there's no reason to make a character pay points for it. As soon as it does matter, the character should pay for it if he wants to use it.

VARIABLE POWER POOL

The ultimate way to buy a *lot* of Background Skills for a minimal point cost is for the GM to allow characters to buy Variable Power Pools for Background Skills. With even a 10-point Pool, a

character can have a lot of Background Skills active at once for even fewer Character Points than a Universal. The downside to this method is that a character may not have access one day to a Background Skill he knew yesterday, which makes no sense.

COMPREHENSIVE BACKGROUND SKILLS

For games that tend to deemphasize Background Skills, but where characters would like to have a lot of obscure bits and pieces of knowledge at their command for character definition purposes, one possible solution is to use a single broadly-defined Background Skill bought with a high roll and the Extraordinary Skill rules (see *Combining Skills Via Professional Skills,* page 9). For example, a character could buy KS: Everything My Character Should Reasonably Know 21- and PS: Everything My Character Should Reasonably Be Able To Do 21-. This gives him an at least an 11- roll to know all sorts of information pertinent to his background no matter how obscure.

FREE BACKGROUND SKILLS

Lastly, the GM can simply give characters Background Skills for free if those Skills are intended primarily for "flavor" and to explain a character's history and training but are highly unlikely to have any significant use in the game. For example, if a character wants to be an expert on, say, Ming porcelain or Neanderthal culture, what can it hurt to let him have KS: Ming Porcelain 11- or KS: Neanderthal Culture 11- for free? Unless the GM expects the PCs to have to deal with matters pertaining to Chinese pottery or prehistoric lifestyles on a regular basis, those Skills don't provide any game benefit to the character at all. They're just "window dressing" to make the character more fun for the player, so let him have them at no cost.



OTHER GAME ELEMENTS



While Skills are an important part of the *HERO System,* they're not the only element used to create characters and abilities. As one piece of a greater whole, Skills frequently interact with the other elements of the rules, such as Powers and Disadvantages.

PERKS

Some Perks complement Skills, or in effect replace them in limited circumstances. Access and Computer Link allow a character to accomplish some tasks without using Skills like Lockpicking, Security Systems, Stealth, or Computer Programming. A Contact or two are usually easier to use than High Society or Streetwise (and possibly safer as well). A Deep Cover takes the place of Disguise in some respects, and Reputation provides a bonus to some Interaction Skill rolls. Players building Skill-based characters should keep these sorts of Perks in mind as a way of differentiating a character or expanding his capabilities.

ACCESS

A character who looks for a means of Access in the right place can find it by succeeding with a Concealment roll. In some cases other Skills, such as SS: Architecture, may function as Complementary Skills; characters generally can't find a means of Access with an ordinary PER Roll (or if the GM does allow this, the PER Roll suffers a -3 or greater penalty). As noted in the Perk's description, a character who purchases Access can make it even harder to find by paying a greater cost.

COMPUTER LINK

Unless a character has another Perk or ability that explains how he got it (such as Membership: FBI for a Computer Link to the FBI's NCIC computer system), GMs in "realistic" campaigns might rule that a character has to have a minimum level of competence in Computer Programming to buy this Perk. Typically the minimum level equals 10 + the amount of Character Points spent on Computer Link. Thus, if a character wants to buy a Computer Link to a highly-secured military database (costs 6 points) he has to have Computer Programming with a 16- or better roll.

CONTACT

If a character has a Contact who may be able to help him with some Skill-related task — such as providing information or resources the character currently lacks — the GM may let the character use the Contact roll as a Complementary "Skill" Roll. If the Contact roll provides a bonus, it means the character was able to get in touch with the Contact and that the Contact was able to provide assistance. If it doesn't, either the character couldn't get in touch with the Contact, or the Contact can't help him for some reason.

MONEY

In some cases a character can make it easier to perform a task or resolve a problem by "throwing money at it" — in other words, by spending extravagantly on the best parts, a legion of assistants, copious bribes, or whatever else is necessary for what he's doing. At the GM's option, a character with Money can obtain a +1 bonus to a single Skill Roll for each 1 point of Money he "throws" at the problem. This represents a fraction of his annual income equal to the fraction of his points of Money he spends, so it's not an idle sacrifice. For example, if a character with 10 Character Points in Money spends 2 points of his Money to get a +2 bonus on a single Skill Roll, that represents 20% of his income for that year; if a character with 15 points of Money spends 5 points of it on a single Skill Roll, he get a +3 bonus on that roll at the cost of 33% of his annual income.

The GM should only allow a character to throw Money at a Skill Roll if doing so will significantly inconvenience that character for that year. If the campaign doesn't focus much on Money, or characters' financial lives never seem to be part of the game, the GM shouldn't allow characters to use this rule. On the other hand, if the nature of the campaign is such that the GM can make the character feel the financial pinch of throwing Money at a Skill it's a good way to let a character prove just how much succeeding with a specific roll means to him.

On the other hand, too little money may cause real problems with a project. For every 10% below the calculated expenses that the character spends, he suffers a -2 on relevant rolls. In "realistic campaigns," the project is simply impossible below half the appropriate cost. In cinematic games, a sufficiently clever inventor can improvise and scrounge with no money at all.

VEHICLES AND BASES

See Chapter Three regarding Skills and Vehicles/Bases, including expanded information on laboratories.

TALENTS

Many Talents resemble Skills in some ways (albeit in an improved form), or interact directly with Skills on a regular basis. For example, Bump Of Direction is similar to some applications of Navigation, but generally has no chance to fail; Double-Jointed provides a specific modifier for Contortionist rolls; having Perfect Pitch makes it easier to use music-related Skills.

A Talent might reflect a character's high degree of competence with a particular Skill. For example, a character who's especially skilled at balancing on narrow objects and ledges might have the *Supreme Balance* form of Environmental Movement in addition to the *Breakfall* Skill.

Here are several new Talents that relate to Skills and Skill use:

COMBAT-READY

A character with this Talent is particularly adept at using a Skill in combat or crisis conditions — he can focus past the distraction and the danger and get the job done. He suffers no penalty for combat or crisis conditions (see page 33). The character chooses which Skill this Talent applies to when he buys the Talent, and cannot change it thereafter.

At the GM's option, characters can use Combat-Ready as a model for designing more Talents to counteract other common Skill Modifiers. For example, a *Grace Under Pressure* Talent might reduce or eliminate the penalty for time/deadline stress.

■ **Combat-Ready Cost:** 2 Character Points (bought as +3 with a specific Skill with the Limitation *Only To Counteract Combat/Crisis Condition Penalties* (-2)).

EXPERTISE

The character is such an expert at using a certain Skill that conditions which hinder or hamper most characters don't affect him, or affect him to a lesser degree. In game terms, this Talent functions as a +1, +2, or +3 bonus the character can only use to counteract or negate Skill Roll penalties; the amount of the bonus depends on how many points the character pays for the Talent.

The character chooses which Skill this Talent applies to when he buys the Talent, and cannot change it thereafter.

■ **Expertise Cost:** 1, 2, or 3 Character Points (bought as +1 to +3 with a specific Skill with the Limitation *Only To Counteract Skill Roll Penalties* (-1))

SKILL MASTER

The character has developed a high level of proficiency with a single Characteristic-Based Skill, such as Climbing, Deduction, Navigation, or Stealth. He chooses one Skill when he buys this Talent, and receives a +3 bonus for all uses of that Skill.

Some characters have even greater mastery of Skills. They can apply the same +3 bonus to all Skills based on a single Characteristic.

■ **Skill Master Cost:** 6 Character Points (bought as +3 with one Skill) or 15 Character Points (bought as +3 with all Skills based on DEX, INT, or PRE [choose one])

POWERS

In some campaigns, characters who are particularly skilled at some sort of task or ability buy a Limited Power to represent that instead of a Skill. These abilities are usually known as "Super-Skills" or "Heroic Talents." They're similar in many respects to Talents, and you can find dozens of them written up in genre books like *Dark Champions* and *Pulp Hero.* Additionally, most of the Skill descriptions in Chapter Two include a section that discusses how that Skill interacts with Powers, and in some cases what Powers characters might use as a "substitute" for that Skill.

ADJUSTMENT POWERS

As stated on page 105 of *The HERO System 5th Edition, Revised,* characters can only use Adjustment Powers to affect Skills with the GM's permission. Because Skills are so inexpensive (compared to Powers), Adjustment Powers could easily be unbalancingly effective when used on or against them. An average roll on just two to three dice of Drain would be enough to wipe out even a costly Skill, whereas a similar Aid would provide a +5 bonus to a Characteristic-Based Skill! If the GM wants to leave open the possibility of Adjusting Skills, he should consider treating them as if they were Defense Powers: Adjustment Powers only have half effect on them.

MENTAL POWERS

If the campaign uses the rules for Negative Skill Levels, characters can buy Negative Skill Levels to apply to a victim's chance of making a Breakout Roll. A character may use an Overall Level, or any other Skill Level that can apply to EGO Rolls, to improve his chances of making a Breakout Roll.

CHANGE ENVIRONMENT

Change Environment provides a convenient way for a character to impose a Skill Roll penalty on another character. Per the Combat Effects Table on page 136 of *The HERO System 5th Edition, Revised,* the cost for a -1 penalty on a specific Skill's roll (including the ability to force the victim to make a Skill Roll, if appropriate) costs 3 Character Points for each additional -1 beyond the initial "free" combat effect. At the GM's option, characters can buy a -1 penalty to all Skills of a given category (Agility Skills, Intellect Skills, Interaction Skills, Knowledge Skills, Professional Skills, or Science Skills) for 5 Character Points. For this purpose the rolls needed to perform "stunts" with a Transport Familiarity count as an Agility Skill.

DISPEL

The rules about using Adjustment Powers on Skills also apply to Dispel.

ENHANCED SENSES

Enhanced Perception is a Power, not a Skill. Therefore characters may put Limitations on any type of Enhanced Perception bonus; the rule forbidding characters to Limit 2-point Skill Levels does not apply.



A character cannot use Transmit by itself to transmit "false signals," misleading information, or the like — any more than an untrained person can use his voice to precisely make the sound of a car engine. To transmit false or misleading information a character needs either (a) a properly-constructed Images power that affects the appropriate Sense Groups, or (b) a relevant Skill based on the Sense Groups involved (such as Mimicry, Ventriloquism, Systems Operation, or perhaps Power). At the GM's option, any character can try to Transmit false or misleading information at any time. However, any attempt to see through the subterfuge gets a +3 or greater PER Roll bonus. If the character uses a relevant Skill (as described above) and fails the roll, the same rule applies — but if he makes the roll, the PER Roll gets no bonus and must win a Skill Versus Skill Contest against the Skill Roll.

LEAPING

A character can buy Penalty Skill Levels to offset the Range Modifier as it applies to Leaping unless the GM rules otherwise.

MIND CONTROL

Characters can often use Mind Control to make Interaction Skills more likely to succeed. For each level of Mind Control achieved (greater than EGO, EGO +10, and so on) a character usually receives a +2 (or greater) bonus to his Interaction Skill Roll. However, he usually also has to achieve the +10 "target will remember actions and think they were natural" modifier, or the eventual success of a Breakout Roll may also ruin the effect he wanted to achieve with the Skill.

MIND SCAN

The rules for Mind Scan specify that bonuses to the ECV Attack Roll can be bought as an Adder. However, that does not prevent a character from buying ordinary Combat Skill Levels, either with Mind Scan alone or all Mental Powers, to improve his ECV with Mind Scan. Either or both ways of improving ECV can be applied to the same Mind Scan power.

MISSILE DEFLECTION AND REFLECTION

Sometimes the situation arises where a character buys Missile Deflection through a Focus (such as a sword), and he has 3-point or more expensive Combat Skill Levels with that Focus. Generally speaking, he cannot apply those CSLs to improve his Missile Deflection roll — a character should buy CSLs specifically for Missile Deflection if he wants to improve his roll, as described under the power. However, the GM can allow some broader Levels (and of course any Overall Levels) to apply to the roll as he sees fit.

With the GM's permission a character can buy 3-point Combat Skill Levels that apply to improve OCV with both Missile Deflection *and* Reflection.

With the GM's permission, a character can buy Penalty Skill Levels to counteract the Missile Deflection penalty for multiple deflections. However, the PSLs can *only* cancel successive Deflection penalties; otherwise the character should buy straightforward OCV bonuses as prescribed for the Power.

SKILLS

As discussed elsewhere in this book, including the expanded Skill descriptions in Chapter Two, there are many intriguing abilities characters can create by applying Limitations (and sometimes Advantages) to Skills. Among other things, this is

a good way to "specialize" a Skill — buy bonuses to the Skill Roll that only apply in certain situations.

TELEPATHY

If a character uses a Skill when a person with Telepathy tries to read his mind, the knowledge imparted by the Skill counts as a "surface thought." If the character's not using a Skill, the knowledge it imparts counts as a "deep, hidden thought" (or possibly as a "memory" if the character hasn't used that aspect of the Skill for a long time). In some cases, a Skill that hasn't been used for a long time (such as one that's suffering atrophy, as described on page 29) would qualify as a "memory."

TELEPORTATION

The Attack Roll to appear in a specific hex is an ordinary Attack Roll in Ranged Combat and can be modified by any sort of appropriate Combat Skill Level (such as 2-point CSLs with Teleportation or 5-point CSLs with Ranged Combat).

TRANSFORM

Using a Mental Transform to remove a Skill from a character requires a Major Transform. So does giving a person a Skill (the rules for adding abilities to characters with Transform apply).

POWER ADVANTAGES

Characters rarely buy Skills as Powers with Advantages, but it is possible (though you should check with your GM to make sure he permits it). Except as noted below or if the GM rules otherwise, generally Advantages work the same for Skills as for any other Power (though many of them, such as Armor Piercing, Autofire, AVLD/NND, Damage Shield, MegaScale, and Penetrating, aren't really appropriate for Skills).

If a character applies an Advantage to a Skill, he must apply it to the entire cost of the Skill — both the base cost and any increases to the roll he purchases. He can't just apply it to the base cost. However, with the GM's permission a character could buy a partially-Advantaged Skill (for example, by applying an Advantage to a purchased increase to the Skill Roll so that only the increase works better or has some additional functionality).

BASED ON EGO COMBAT VALUE

Since Skills typically don't involve Attack Rolls or work at Range, generally characters shouldn't apply BOECV to them. However, the GM might rule that applying BOECV (at the +1 value) to a Characteristic-Based Skill means the character calculates that Skill's roll from EGO rather than the Characteristic normally associated with that Skill. For example, Seduction, BOECV would have a (9 + (EGO/5)) roll rather than a (9 + (PRE/5)) roll.

DOES KNOCKBACK

If a GM permits a character to apply Does Knockback to a Skill, he must decide how to calculate the Knockback. One possibility is to link the amount of Knockback to the character's degree of success. For example, if the roll succeeds exactly, he does 1" KB; for each additional point the roll succeeds by, the Skill does +1" KB (or whatever multiplier the GM prefers — perhaps +2" per point, or +1" per 2 points).

INVISIBLE POWER EFFECTS

Generally the use of Skills is perceivable by at least three Sense Groups, like many Powers — other characters can see a character using a Skill, hear the noises he makes using it, and so forth. And they usually remain that way; making them non-perceivable isn't logical or sensible. However, in some cases, such as some "superskill" abilities, GMs might let characters apply Invisible Power Effects to a Skill. For example, Interrogation might have IPE so a character could torture people without leaving any visible signs of the abuse without having to make the Skill Roll at a penalty (see page 204).

USABLE ON OTHERS

Generally, characters shouldn't make Skills Usable By Other/Usable Simultaneously, though the GM can permit it if he feels that would be appropriate. For example, a character might create a spell that would allow him to temporarily grant a Skill (or a bonus to a particular Skill) to another character via UBO.

If a character wants to apply a Skill to an object — for example, grant Lockpicking to a lock to make it harder to pick (by giving it a high roll for Skill Versus Skill Contests) — that requires Usable As Attack. Objects aren't "other people" to whom a character can grant powers. (That might change if the object were a Computer, or controlled by a Computer, since then there's a "being" to whom the character can grant the power.) And of course, a character could use his own Skill (whether a normal Skill, or one obtained via a power, spell, device, or the like) to affect the object in the usual way, with his roll becoming the "target" for Skill Versus Skill Contests. For example, a "Spell Of Locking" might not involve Lockpicking Usable As Attack to "grant" the lock a Lockpicking roll, it would simply give the character himself Lockpicking, thus allowing him to make a roll to lock doors. When he makes a Skill Roll, the amount he makes it by becomes the modifier for the Skill Versus Skill Contest.



POWER LIMITATIONS

Limitations on Skills are much more common than Advantages, the *Translation Only* (-½) Limitation for Cryptography being just one example. Many of the Skill descriptions in Chapter Two suggest possible ways to Limit those Skills. For example, look at the "Subdividing" section of the descriptions, which discusses ways to split the Skill into two or more Skills for greater differentiation between characters. Even if you don't want to subdivide a Skill, any of the suggested divisions could become ways to "specialize" the Skill with Limitations. For example, the text suggests splitting Demolitions into *Setting Explosives* and *Disarming Explosives.* Instead of doing that, you could have a character who's particularly adept at disarming explosive devices buy +4 with Demolitions, Only To Disarm Explosives (-½).

CONCENTRATION

Characters generally shouldn't take this Limitation for Skills. If a Skill requires a particularly high degree of concentration (either all the time, or for some specific uses), the GM should impose the appropriate restrictions on movement, DCV, and the like as situational modifiers.

FOCUS

Chapter Three shows that there are lots of ways to buy Skills (or bonuses to Skills) as Foci. As noted on page 220 of *The HERO System 5th Edition, Revised,* if a character buys a Characteristic-Based Skill through a Focus, then the appropriate Characteristic is assumed to be 0. For example, a high-tech tool with the Skill *Lockpicking* would have a 0 DEX, and the base Skill Roll would be 9 + DEX/5 = 9-. (A character who buys a Background Skill on a Focus gets the standard 11- roll for 2 Character Points, but Background Skills bought as Powers do not get any benefit from Skill Enhancers the character has.)

GESTURES; INCANTATIONS

Most Skills involve using the hands to some degree. This does not entitle a Skill to take the *Gestures* Limitation (or *Restrainable*), which characters can only apply to Skills with the GM's permission. Similiarly, Skills often require a character to communicate verbally with someone; this does not qualify for the *Incantations* Limitation.

LINKED

In general, there's nothing wrong with Linking a Skill to an ability, unless the GM forbids it. However, Linking Skill Levels (of any type) to an ability is more likely to cause game balance problems than Linking a Characteristic-Based Skill. Characters cannot Link Skill Levels to the attack or ability with which they're meant to be used; by definition, they only work with that ability. However, it might

be reasonable in some circumstances to Link Skill Levels with a completely unrelated ability — for example, Skill Levels with all Agility Skills that Link to a character's Change Environment. Of course, the GM can forbid any such abilities if the Link doesn't make sense to him or he's concerned it may cause other problems.

The rules for using Combat Skill Levels with multiple-power attacks (*The HERO System 5th Edition, Revised,* page 359) also apply to Linked attacks.

REQUIRES A SKILL ROLL

Obviously, this Limitation interacts with Skills in important ways — not because characters apply it to Skills, but because it requires the use of a Skill. Here are some additional rules for Requires A Skill Roll ("RSR") to supplement those on pages 304-05 of *The HERO System 5th Edition, Revised*.

Even if a character has bought a Skill Roll up to so high a level that he's unlikely to ever fail the roll (even taking the Active Point penalty into account), that does not change the value of the *Requires A Skill Roll* Limitation. A character in that situation paid a significant number of Character Points to buy his Skill Roll that high, so he should get the value of what he paid for. If the GM's concerned about this, he can handle the problem by forbidding characters to buy their Skill Rolls above a certain threshold or instituting Normal Skill Maxima rules.

As noted in the main rules, if a character has two Characteristic-Based Skills for Required Skill Rolls for a single power, he takes a -¾ Limitation. If the two Skills are a Characteristic-Based Skill and a Background Skill/Characteristic Roll, or if both of the Skills are Background Skills/Characteristic Rolls, reduce the Limitation to -½.

With the GM's permission, a character can have a Required Skill Roll that takes longer than a Zero Phase Action by applying the *Extra Time* Limitation and noting how it applies. In that case, the Extra Time *adds to* the time needed to use the power normally. For example, if the Required Skill Roll takes a Half Phase, and it's applied to an Attack Power (which normally requires a Half Phase/Attack Action to use), then the power requires a Full Phase to use (Half Phase + Half Phase).

If a character defines a Required Skill Roll as an Attack Roll, making that roll does not require a separate Attack Action.

If a character has Requires A Skill Roll on every slot of a Multipower, he gets to apply the Limitation to the reserve cost (even if the slots don't use the same Skill for their RSR). That does *not* mean he has to make two Skill Rolls to use a slot; he only has to make one. If the RSR Limitations have different values, the reserve uses the lowest value.

Since a character only has to make a Required Skill Roll at the start of using a power, *technically* he could make one roll at the beginning of the day to activate a Persistent Power (such as Damage Reduction) and then have the power remain in effect indefinitely. However, most GMs forbid this, since it can cause game balance problems and tends to flout the rules of common sense and dramatic sense. If necessary, the GM can establish a rule for how often a character has to make a Required Skill Roll to maintain a Persistent Power (such as once per combat, or per Turn of combat, once per Hour, or whatever seems most appropriate), but this should be significantly less than once per Phase.

If a character Pushes or Haymakers a power with Requires A Skill Roll, the Active Point penalty does not increase. Actions like using Haymaker (or other Combat/Martial Maneuvers) or Pushing don't increase the Active Points in a power.

Naked Advantages

If a character takes Requires A Skill Roll as a Limitation for a naked Advantage, he calculates the Active Point penalty to the Skill Roll based only on the points in the naked Advantage (not on the Active Points of the power plus the naked Advantage). The same rule applies in reverse: a naked Advantage is a separate ability, and thus doesn't factor into the calculation of the Required Skill Roll penalty for the power the naked Advantage works with unless the naked Advantage itself has RSR (which it probably should, if it's intended to apply to an ability that has RSR). In that case, use the rule on pages 304-05 of *The HERO System 5th Edition, Revised* regarding activating two powers with the same RSR at the same time.

If a character applies Requires A Skill Roll to a naked Advantage, he only has to make the roll when he uses the Advantage — if he just uses the power without the Advantage, he doesn't have to make the roll, because the base power itself isn't Limited that way. However, since naked Advantages are by default Instant Powers, maintaining a naked Advantage with RSR typically requires one roll per Phase. If a character only wants to have to roll once to activate the naked Advantage, then have it remain in effect until he changes the Advantage (or the like), he should apply Continuous (+1) to the naked Advantage to make it a Constant Power.

POWER FRAMEWORKS

It's unusual, but not unheard of, for characters to buy Skills as slots in a Power Framework (usually a Multipower or Variable Power Pool). Skills is a Special Power, so characters can only buy it through a Framework with the GM's permission.

VARIABLE POWER POOLS

Characters sometimes want to buy Power Pools for Skills, sometimes as a way of representing a special power like "reflex memory" (see below), and sometimes as a way of buying lots of Skills at once without having to pay for each of them individually (see page 51). This requires the GM's permission. If the GM grants permission, the Skills typically get the standard 9 + CHAR/5 roll. If a character buys a Skill through a VPP, he's generally buying it using the *Skills* Power, and it's subject to all rules pertaining to that Power. Nothing in those rules makes all Skills subject to a rule that pertains only to Focused Skills.

VPP Skill Rolls

Here are some additional rules and clarifications regarding the Skill Roll needed to change the slots in a Variable Power Pool.

If a character has the *Character Has No Choice Regarding How Powers Change* Limitation for his Variable Power Pool, he still needs a Skill Roll; he makes the roll to determine when the slots change (he just can't dictate what they change into). If he has the *Character Has No Choice Regarding When Or How Powers Change* Limitation, he cannot have a Skill to control the VPP, but he doesn't have to apply the *No Skill Roll Required* Advantage. By definition he has no control at all, and that Advantage indicates a high degree of control.

Even though changing the slots in a Variable Power Pool is a Zero Phase Action, a character cannot change two slots individually as a way of minimizing the Skill Roll penalty on each one. Unless the GM rules otherwise, a character should make only one Skill Roll to change his VPP each Phase, with the penalty to the roll based on the total Active Points of all slots being changed.

With the GM's permission a character can use a Background Skill roll (Characteristic Roll) to change his Variable Power Pool. This requires a +¼ Advantage on the VPP's control cost since increasing a Background Skill's roll is so inexpensive.

If a character buys a Variable Power Pool with the Advantage that he doesn't need a Skill Roll to change the Pool, he can still apply the *Requires A Skill Roll* Limitation to an individual slot, if desired.

Example Skill VPPs

Here are three Skill-oriented Variable Power Pools:

I Can Do Anything: The character literally can do anything and knows everything. Since he can't afford to pay for that many Skills individually, he buys a Variable Power Pool for Skills with the GM's permission. Of course, he can't have all his Skills "available" at once, which may not make sense in setting terms, but he can change the VPP pretty quickly if necessary.

> **I Can Do Anything:** *Variable Power Pool (Skill Pool), 22 base + 11 control cost, Powers Can Be Changed As A Zero Phase Action (+1), No Skill Roll Required (+1); Only For Skills (-½). Total cost 44 points.*

Knowledge Sharing: The character can share knowledge — either granting what he knows to others temporarily, or gaining the use of another person's memories and information. In game terms, this rather broad effect is defined as a Variable Power Pool. The Pool can do two things: first, the character can use it to apply the *Usable Simultaneously* Advantage to any of the character's Knowledge Skills (an exception to the general rule against buying naked Advantages in Power Frameworks); second, the character can use it to buy a Knowledge Skill that another character has (an exception to the general rule about not buying Skills through Power Frameworks). In either case, he must touch the character to/from whom he transfers a Knowledge Skill. (At the GM's option, this ability might apply to Skills other than Knowledge Skills that involving knowing things, such as Languages or some aspects of Computer Programming.) The Skills remain in the character's mind, or the mind of the person to whom he transferred them, only as long as he keeps the Power Pool assigned to the appropriate abilities. Changing the allocation of the Pool means the knowledge shared fades away instantly. If a character wants to gain a Knowledge Skill permanently through psionic sharing, he has to buy the Skill with Character/Experience Points.

> **Knowledge Sharing:** *Variable Power Pool (Knowledge Sharing Pool), 20 base + 10 control cost; Only For Sharing Knowledge (see text; -1). Total cost 25 points.*

Reflex Memory: The character can copy, mimic, or otherwise use the physical skills and abilities of any person, provided he observes the target using them. Once he's copied them into his own "reflex memory," he can use them again whenever he wants (assuming he allocates Variable Power Pool points to them). "Physical skills" include, but are not necessarily limited to, the following:

■ Skills such as Acrobatics, Breakfall, Climbing, Combat Skill Levels, Contortionist, Defense Maneuver, Fast Draw, Martial Arts, Skill Levels with Agility Skills, Sleight Of Hand, and Two-Weapon Fighting

■ Powers and abilities defined as "super-skills" or "enhanced physical training," such as an Energy Blast or RKA defined as "super-accurate throwing" or a Hand-To-Hand Attack defined as a secret martial arts maneuver.

Note that this does not necessarily include any Skill with a physical *component.* The character couldn't copy Lockpicking, for example, because it requires more than just deft physical movements — it requires knowledge the character can't acquire just by watching a locksmith at work. The GM determines whether the character can copy a particular Skill or ability. If appropriate, the GM may



allow the character to substitute a related Professional Skill. For example, Reflex Memory won't let a character copy Computer Programming by watching a programmer type, but the GM might let him "copy" PS: Typing instead.

This power requires the GM's permission for two reasons. First, it involves putting Skills (including Combat Skill Levels) in a Power Framework, something normally forbidden by the rules. Second, it has a significant potential to unbalance a campaign, since it lets a character have a wide variety of Skills and skill-like abilities without paying for them individually. The GM may eventually decide that the character has copied so many abilities that the *Only For Physical Skills* Limitation no longer really restricts or hinder him, in which case he may require the character to pay Experience Points to buy the value of the Limitation down to -0.

Reflex Memory: *Variable Power Pool (Reflex Memory Pool), 30 base + 15 control cost; Only For Physical Skills The Character Observes In Use (-½). Total cost: 30 + 10 = 40 points.*

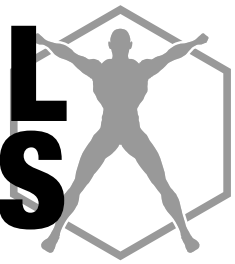
chapter two:





THE SKILLS

SKILL CATEGORIES



The *HERO System* rules group Skills into five categories:

Agility Skills
Background Skills
Combat Skills
Intellect Skills
Interaction Skills

The only Skill that doesn't fall into one of those categories is Skill Levels, which lets a character improve his Skill Roll with several Skills. Characters may have Skills from any or all categories. Some additional categories based on how Skills function are discussed below.

For Skill Modifiers specific to each category of Skills, see pages 36-40. Generally each category of Skills, as a whole, works the same from genre to genre and setting to setting, unless noted otherwise below.

Agility Skills

Agility Skills are based on DEX. They cost 3 Character Points for a base (9 + DEX/5) or less roll; a +1 to any Agility Skill costs 2 Character Points. Modifiers for them, including Encumbrance, are discussed on page 36. The Agility Skills are:

Acrobatics
Breakfall
Climbing
Contortionist
Combat Driving
Combat Piloting
Fast Draw
Lockpicking
Riding
Sleight Of Hand
Stealth
Teamwork

Background Skills

Background Skills represent different kinds of information or knowledge a character possesses. Typically, characters acquire them by growing up in a certain society, studying under a teacher, or through various life experiences. Background Skills help flesh out a character and can prove crucial in non-combat situations. The cost for Background Skills varies according to type. They are:

Knowledge Skill (KS)
Languages
Professional Skill (PS)
Science Skill (SS)
Transport Familiarity

At the GM's option, Knowledge Skills and Science Skills may sometimes be considered Intellect Skills if they have an INT-Based Roll.

BUYING BACKGROUND SKILLS

Many Background Skills, such as KSs and PSs, cost 2 Character Points for an 11- roll, 3 points for a Characteristic-Based Roll (typically using INT), +1 to the roll for +1 Character Point. A character automatically gets the 11- roll for 2 Character Point even if his INT is so low that his INT Roll is 10- or worse; each +1 Character Point spent thereafter increases the roll by 1 as usual (to 12-, 13-, and so on). Similarly, if a character has an INT Roll of 11-, he gets the base 11- roll for 2 Character Points, and can increase it at a cost of 1 Character Point per +1 to the roll; he doesn't have to spent 3 Character Points to get the 11- roll.

If a Vehicle or Base buys a Background Skill (typically to define or create a laboratory) for 2 Character Points, the Vehicle/Base (lab) starts with a base Skill Roll of 11-, not the 9- that's standard for Characteristic-Based Skills for Vehicles/Bases. (Of course, the Vehicle/Base could buy an 8- Familiarity with a Background Skill for only 1 Character Point if it wished.)

DISTINGUISHING KNOWLEDGE, PROFESSIONAL, AND SCIENCE SKILLS

Players should be careful to differentiate between Knowledge Skills, Professional Skills (PSs), and Science Skills (SSs):

Knowledge Skills provide a character with knowledge of what something is, how it works, who's involved with it, and related subjects. They do not provide a character with any physical abilities. In a sense they represent "theoretical" knowledge, though that's misleading in some respects because they have many practical and useful applications.

Professional Skills give the character the ability to do things or perform certain tasks — though a KS may be required for the character to have in-depth knowledge of how he's about to exercise those physical skills. In a sense they represent the "practical" abilities associated with a particular field or subject.

Science Skills are a sort of cross between KSs and PSs for certain scientific or technical fields of knowledge. They include both theoretical knowledge of the subject and the ability to perform experiments and use equipment associated with that subject.

For example, a character might have KS: Electrical Systems. This provides him with knowledge of how different electrical systems and devices work, the history of electrical systems, how (theoretically) to install them, who installs them, and so on. But it doesn't give him the physical skills to do the actual installation work himself; that requires PS: Electrician. A character with PS: Electrician may not be able to tell you all the theoretical and technical details about what he installs, but he knows how to install electrical systems, tune them, repair them, and replace them. He also knows how to use all the types of equipment associated with electricians' work, what electricians tend to get paid, how to make money as an electrician, and so forth. Neither of these characters can actually design an electrical system, though — that requires SS: Electronic Engineering.

See the individual discussions of each of these Skills later in this chapter for more information.

Combining Background Skills

For some campaigns, the distinction between KS, PS, and SS may may seem too artificial or too counterproductive for enjoyable game play. In that case, the GM can simply combine KSs, PSs, and SSs into one Background Skill simply called "Universal Knowledge Skill" (UKS). A character who buys a UKS (for either a non-scientific or scientific subject) gains both theoretical and practical knowledge of the subject. Thus, a character with UKS: Electrical Systems not only knows all about electronic systems, he knows how to install them, work with them, and design them, as well as knowing all about the working conditions of electricians.

The trade-off for this simplicity is potential game balance problems. Giving characters access to so much knowledge, information, and abilities so cheaply could easily cause problems in a campaign. If necessary, the GM can increase the cost of Universal Knowledge Skill (to, for example, 4 Character Points for an 11- roll, 5 points for an INT-Based roll) to balance out the increased effectiveness.

If the GM doesn't want to take the step of creating UKSs, another possible solution is to assume that a KS with at least an 11- roll automatically provides an 8- roll with the related PS (or possibly even PSs), when relevant and appropriate. The reverse also applies: a PS of 11- or more automatically provides an 8- with the related KS. This system doesn't apply with most academic KSs, such as CuK: Asian Culture or KS: History. It also usually doesn't apply where there's a significant "gap" between the KS and the PS. For example, it's entirely possible for someone to know a lot about rock and roll music (KS: Rock Music 14-) but have no ability whatsoever to sing (PS: Singing). But it works well for Background Skills that could represent a mix of physical skills and theoretical knowledge, such as KS: Electrical Systems or KS: Plumbing.

BACKGROUND SKILLS BY GENRE

Background Skills work the same in all genres, though each genre has Background Skills particularly appropriate to it. For example, characters in many Dark Champions campaigns often buy *KS: The Espionage World,* whereas few characters in *Western Hero* campaigns would even consider buying that Skill. See the individual descriptions of each of these Skills later in this chapter for more information.

Science Fiction

Star Hero characters often buy KSs, PSs, and SSs with the prefixes "xeno-" or "exo-," such as SS: Exobiology, SS: Xenoarchaeology, or KS: Xeno-Art History. Both prefixes mean "foreign" or "alien," and refer to a character's knowledge of the subject in question as it pertains to species other than his own. A Human with SS: Exobiology might know a lot about Denebian biology, whereas a Denebian with the same Skill would known about Human biology instead.

In a setting featuring few alien species, a Xeno/Exo Background Skill is easier to use, because there's less to know, and therefore the Skill Roll penalties are likely to be smaller. In settings featuring dozens, hundreds, or even thousands of alien species, a general Xeno/Exo knowledge may not help the character much — he'd be better off buying Background Skills relating to particular species he knows about.

Technically, a Xeno/Exo Skill provides a character with knowledge of the subject as it pertains to *any* species besides his own. However, this may entail some hefty penalties; GMs can adapt the Knowledge Skill Categories (page 210) if necessary (see also the notes for the Science Skills Table, page 260). For better results and/or greater realism, characters should buy Background Skills by species.

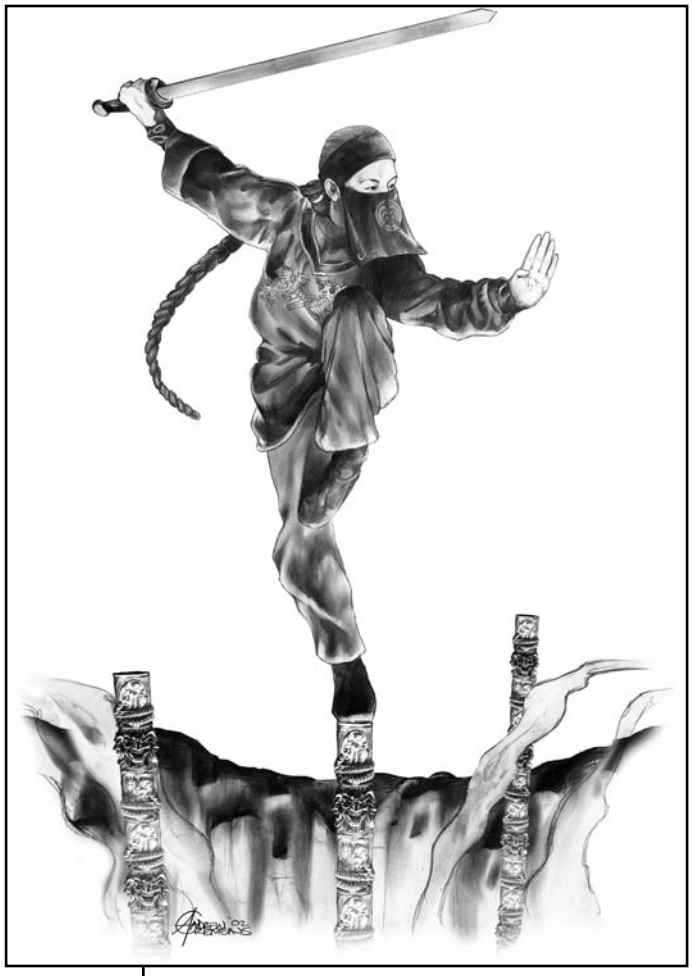
Combat Skills

Combat Skills help the character fight effectively. Typically they do not require a Skill Roll. They are:

Autofire Skills
Combat Skill Levels
Defense Maneuver
Martial Arts
Penalty Skill Levels
Rapid Attack
Two-Weapon Fighting
Weapon Familiarity

OPTIONAL COMBAT MANEUVERS AS SKILLS

One of the effects of Two-Weapon Fighting is to grant characters the ability to use the Optional Combat Maneuvers *Rapid Fire* or *Sweep* (albeit in a restricted fashion) even in campaigns that don't ordinarily allow characters to use them. If appropriate, the GM might allow characters to buy other Optional Combat Maneuvers as Skills even if characters cannot otherwise use them. In effect this makes Optional Combat Maneuvers into something akin to Martial Maneuvers. The GM may, if desired, apply the "characters must buy a minimum of 10 Character Points' worth of maneuvers" rule from Martial Arts to Optional Combat Maneuvers. (Alternately, maybe characters must spend 10 Character Points overall on some combination of Martial Maneuvers, Optional Combat Maneuvers, or both.)



OPTIONAL COMBAT MANEUVERS COST

Optional Combat Maneuver	Cost
Blazing Away	3 Character Points
Club Weapon	3 Character Points
Cover	3 Character Points
Dive For Cover	5 Character Points
Hipshot	3 Character Points
Hurry	3 Character Points
Pulling A Punch	3 Character Points
Roll With A Punch	3 Character Points
Snap Shot	4 Character Points
Suppression Fire	4 Character Points

The accompanying table lists the suggested Character Point costs for various Optional Combat Maneuvers as Skills. Unless the GM rules otherwise, Optional Combat Maneuvers as Skills work just like normal Optional Combat Maneuvers that characters can use for free.

Intellect Skills

Intellect Skills are abilities based largely on learned information, technical data and training, and the like. As noted on page 11, they're good candidates for the alternate Characteristic rules when characters try to use them for tasks involving manual dexterity or the like. At the GM's option, Knowledge Skills and Science Skills may sometimes be considered Intellect Skills if they have an INT-Based Roll.

Intellect Skills are based on INT. They cost 3 Character Points for a base (9 + INT/5) or less roll; a +1 to the roll of any Intellect Skill costs 2 Character Points. (Cramming is an exception to this; it has a flat cost and no roll.) Modifiers for them are discussed on page 37. The Intellect Skills are:

Analyze
Bugging
Computer Programming
Concealment
Cramming
Criminology
Cryptography
Deduction
Demolitions
Disguise
Electronics
Forensic Medicine
Forgery
Gambling
Inventor
Lipreading
Mechanics
Mimicry
Navigation
Paramedics
Security Systems
Shadowing
Survival
Systems Operation
Tactics
Tracking
Ventriloquism
Weaponsmith

Interaction Skills

Interaction Skills are based on PRE. They cost 3 Character Points for a base (9 + PRE/5) or less roll. A +1 to any Interaction Skill costs 2 Character Points. Modifiers for them, including the effects of Comeliness, are discussed on page 37. The Interaction Skills are:

Acting
Animal Handler
Bribery
Bureaucratics
Conversation
High Society
Interrogation
Oratory
Persuasion
Seduction
Streetwise
Trading

INTERACTION SKILLS IN THE CAMPAIGN

Because they represent social relationships and methods by which characters interact — intangible things not easily reduced to numbers and rules — Interaction Skills pose some difficulties in the game. The issues they raise that the GM should consider include:

Affect On Player Characters

First, to what extent, if any, can Interaction Skills affect PCs?

On one end of the spectrum, some GMs rule that PCs are just as susceptible to Interaction Skills as NPCs. As these GMs see it, in the interest of fairness, all characters should be affected the same way. Furthermore, unless the GM wants to give persuasive, seductive, or clever NPCs Mind Control-based abilities, Interaction Skills are the only way to represent some characters' ability to make other people do what they want or see things their way — a common ability in the fiction and movies that inspire RPGs and RPG characters.

At the other end of the spectrum, some GMs rule that PCs are *never* affected by Interaction Skills. People who subscribe to this viewpoint believe the player alone decides how his character reacts to any given situation. Dice rolls and rules should never dictate a PC's actions unless the rules represent a power, like Mind Control, that can be "forced" on a PC. Aside from that, in the realm of human interactions only the player can determine how his character acts. Thus, Interaction Skills are useless against PCs.

Taking the middle ground are GMs who think that Interaction Skills can affect PCs (at least to some degree) but that give the PC a chance to resist them in a Skill Versus Skill Contest or by other means. Typically these rules also apply to NPCs, which sometimes makes it difficult for PCs to use Interaction Skills on them. *Resisting Interaction Skills,* below, discusses some possible methods for this.

None of these approaches is necessarily "right" or "wrong" for everyone. It's a question of how each GM prefers to run his game, how each group prefers to play the *HERO System,* and the needs and demands of a given genre or setting. In some campaigns it may be appropriate, or even desireable, for PCs to suffer the effects of Interaction Skills, while in others that might be utterly anathema. For most groups, the middle approach — Interaction Skills can affect PCs, but they have a chance to resist them — works well.

Effectiveness Of Interaction Skills

Second, how effective can Interaction Skills be? To put it another way, how strong an affect can an Interaction Skill have on a character? In some cases (such as certain uses of Animal Handler or High Society) these questions aren't usually relevant, but for Interaction Skills like Conversation, Persuasion, Seduction, and Trading — all of which can direct, to some extent, a character's actions (see above) — they're important issues.

The accompanying table lists *suggested* guidelines for determining the effects of Interaction Skills when the Skill might affect or dictate a character's actions. Some of the examples rely on characters' Psychological Limitations (which may instead factor in as a modifier to the roll, see page 38), but the presence or absence of a Psychological Limitation isn't the only determinant — a character can be strongly opposed to or in favor of something without having taken a Psychological Limitation to reflect that. The GM can adjust these as he sees fit to make Interaction Skills easier or harder to lose, or alter them to suit specific Interaction Skills better.

By comparison, an Extraordinary Skill Roll or Critical Success with an Interaction Skill is necessary to get a character to do something he's "strongly opposed" to — roughly equivalent to an EGO +20 roll with Mind Control in most circumstances. Greater effects, such as those achieved with EGO +30 Mind Control, generally cannot be achieved with Interaction Skills. (One exception: sometimes a character using Persuasion or the like can convince someone to believe a baldfaced lie that contradicts reality under direct observation. Normally this requires an EGO +30 Mind Control effect but it's specifically mentioned under the Extraordinary Skill rules.)

INTERACTION SKILL EFFECTS TABLE

Skill Roll Made By...	Effect
0 (exactly)	Target will go along with suggestions he's inclined to accept anyway (*i.e.,* against which he has no Psychological Limitations and which don't seem likely to contradict his self-interest)
	Target believes any statement that doesn't contradict prior knowledge or direct observation and which seems plausible or accurate
1-2	Target will go along with suggestions he's neutral about (*e.g.,* which he's neither in favor of nor opposed to and which don't seem likely to contradict his self-interest)
	Target will believe any statement that doesn't contradict prior knowledge or direct observation, even if it seems somewhat implausible or inaccurate
3-5	Target will go along with suggestions he's mildly opposed to (*e.g.,* which he's somewhat opposed to or has a *Moderate* Psychological Limitation against, or which might contradict his self-interest)
	Target will believe any statement that doesn't contradict prior knowledge or direct observation, even if it definitely seems implausible or inaccurate
6-9	Target will go along with suggestions he's opposed to (*e.g.,* which he's somewhat opposed to or has a *Strong* Psychological Limitation against, or which are likely to contradict his self-interest)
	Target will believe any statement that doesn't contradict prior knowledge or direct observation, even if it seems highly implausible or inaccurate
10 or more; Critical Success	Target will go along with suggestions he's strongly opposed to (*e.g.,* against which he has a *Total* Psychological Limitation — a nun gives in to a Seduction attempt, a miser makes a really bad deal using Trading)
	Target will believe patent untruths ("Are you going to believe me or your own eyes?", "The Emperor is wearing new clothes.")



Duration Of Effect

Third, how long do the effects of an Interaction Skill roll last? For example, if Kozar the Dark Mage successfully uses Seduction to sweep the Princess Hallea off her feet, will she always be infatuated with him and/or susceptible to his blandishments, or will she come to her senses sooner or later?

In some cases, the resolution of this issue depends on the circumstances, what the victim has been made to do or believe, or the conduct of the character using the Interaction Skill. When Randall Irons uses Acting to feign an injury and lure Dr. Fang in close, Dr. Fang realizes he was tricked as soon as Randall springs his surprise attack. When Kozar betrays Princess Hallea, she discovers he was just toying with her affections to get what he wanted. When the mob has time to calm down, its members come to understand they gave in to someone's Oratory roll.

In other situations, the exact duration of an Interaction Skill's effects may be a crucial factor in the adventure. For example, a thief's con job using Acting and Persuasion has to hold up long enough for him to get away with the loot. In this situation the final determination depends on the GM, but he should consider the following factors:

■ Is the character still in the presence of the victim "maintaining" the effects of the Interaction Skill? Usually an Interaction Skill remains in effect as long as the character takes steps to "maintain" it and nothing occurs to make the victim question things. Sooner or later, though, even the cleverest story or most charming manner tends to wear thin. Conversely, if the character does nothing to "maintain" the Interaction Skill's effects, it's likely the character will realize he's been tricked or "played" much sooner.

■ Have the events of the adventure or the information available to the victim caused him to question the effects of the Interaction Skill? For example, if a character successfully uses Bureaucratics on a low-level bureaucrat, and while doing the task the victim is confronted by his boss, the victim may very well change his mind and stop helping the character.

■ If the victim failed a roll to resist the Interaction Skill's effects (see below) but only by a little (say, 1-2), he's more likely to shake off the Skill's effects (or at least question them) than someone who fails by a greater degree.

■ How "outrageous" was the initial effect? The more the character asks of the victim, the sooner the victim's likely to realize he's being manipulated.

As a good rule of thumb, the GM should establish a Base Time for the effects of an Interaction Skill to last in a give situation (such as 1 Turn, 1 Minute, 1 Hour, or 1 Day). For every point the Skill Roll succeeds by, add +1 increment (or some fraction thereof). For example, in many cases 1 Hour makes a good Base Time for the duration of an Interaction Skill's effects; in that case, a character whose roll succeeded by 2 would cause effects lasting (1 + 2 =) 3 hours.

Related to the "duration" of an Interaction Skill is the issue of when, if ever, the victim of an Interaction Skill realizes what's happened to him. With some Skills (such as Interrogation) this is immediately obvious, and in most cases once the effects of an Interaction Skill fade the victim is aware he was manipulated (assuming he even cares). But sometimes, as with some uses of Conversation or High Society, a character who's fallen prey to an Interaction Skill may never know what was done to him.

Resisting Interaction Skills

Fourth, how can characters resist Interaction Skills used against them? In meta-game terms, the target of an Interaction Skill isn't going to meekly comply with what his "attacker" wants. At the most basic level, the character has to succeed with his Interaction Skill roll before he has any chance of getting what he wants. But that's not necessarily the end of the story.

Because Interaction Skills can directly or indirectly dictate a character's actions, usually to his detriment, most GMs won't allow a character to succeed in using one with just a single Skill Roll. Instead, the target has a chance to resist. Usually this takes the form of a countervailing roll against the "attacker's' Interaction Skill roll in a Skill Versus Skill Contest. In most cases the "resistance roll" is an EGO Roll, but it could be a PRE Roll, a roll with an appropriate Skill, a PER Roll, or the like. The modifiers for Interaction Skills (pages 37-39) can apply to either roll, as the GM sees fit. For example, if the target of an Interaction Skill roll has a Strong Psychological Limitation opposed to the Interaction Skill, the GM could apply the modifier listed on page 38 as a penalty to the Interaction Skill roll or a bonus to the resistance roll. Modifiers from the Talent *Resistance* and its kin also apply.

Other factors may also affect the roll. For example, in a *Star Hero* campaign, some alien species may be incapable of lying, and, believing others to be the same, be very gullible (thus granting a bonus to others' Persuasion rolls, or a penalty to their own EGO Rolls to resist).

Typically a character only gets to make one roll to resist an Interaction Skill. However, if the effects of the Skill last for a long time (see above), the GM might allow additional rolls, perhaps at a cumulative penalty similar to that for Breakout Rolls versus Mental Powers.

If the target of an Interaction Skill roll succeeds in resisting the Skill, it means not only that the Interaction Skill failed, but usually that the target realizes the other character was trying to use an Interaction Skill on him (if it isn't already obvious). That could color his reaction to the character, leading to a humiliating incident, a fight, penalties on the character's future attempts to use Interaction Skills on that person, or the like.

Finally, in some cases, such as Trading, the rules specifically note that any person can "resist" them by removing himself from the situation or refusing to interact with the character using the Skill any further.

Other Skill Categories

Besides the five standard Skill categories, you can also classify Skills by how they function.

PERCEPTIVE SKILLS

"Perceptive Skills" are Skills involving the perception or analysis of phenomena. While many Skills may involve having to look at or listen to something, Perceptive Skills depend on that ability. Examples include Lipreading, Tracking, and some aspects of Criminology and just about any Technological Skill. Typically Perceptive Skills depend on Sight, but in some cases other Senses may be involved.

As noted on page 39, modifiers to Perception Rolls, particularly the Range Modifier, also apply to Perceptive Skill rolls. Characters may be able to use their spells, superpowers, or other abilities creatively to obtain bonuses. For example, a character who can Shrink may have an easier time finding trace evidence with Criminology or tracks with Tracking because at his tiny size, even a small clue looks much larger than it does to a normal-sized person. A character with certain Enhanced Senses may also find it easier to use these Skills; for instance, a character whose N-Ray Vision lets him see inside a gadget may be able to fix it or modify it more easily than a character who only has ordinary eyesight.

TECHNOLOGICAL SKILLS

Technological Skills involve working with particular types of equipment or technology. While many Skills require the *use of* equipment, or are easier to perform with equipment, Technological Skills are Skills that let a character *work with or on* types of equipment. Technological Skills are usually dependent (to some degree) on using tools and other gear (*i.e.,* equipment Skill Modifiers apply), and are subject to the rules regarding obsolete and advanced technology (page 39). The Technological Skills are:

Bugging
Computer Programming
Demolitions
Electronics
Inventor
Lockpicking
Mechanics
Security Systems
Systems Operation
Weaponsmith

THE SKILLS



The remainder of this chapter provides detailed descriptions of the 67 Skills listed on the Skills Table on page 47 of *The HERO System 5th Edition, Revised* (and reprinted here for your convenience). In most cases, the Skill descriptions use roughly the same order and manner of presentation for the sake of consistency and ease of use.

Basic Information: The first sections of a Skill's writeup discuss the basics: what the Skill allows a character to do and what knowledge it imparts to him. This is followed by a discussion, often a lengthy and detailed one, of specific uses of the Skill and how they work, including relevant modifiers. If appropriate there's a modifiers table for that particular Skill.

Equipment: If the Skill requires (or can benefit from) particular types of equipment, that's discussed here. For some Skills, such as Bugging and Security Systems, this section includes *HERO System* writeups of numerous devices.

Powers And The Skill: If appropriate, a Skill's description discusses how Powers interact with that Skill. This may include information on which Powers can replace the Skill (or make it unnecessary), and which ones characters can use to build "super-skill" abilities to take the Skill's place.

Consequences Of Failure: In situations where it's not discussed in the basic information, a Skill's writeup includes a section discussing what happens when a character fails his Skill Roll.

Base Times: If they're not listed elsewhere, this section describes the Base Times for common tasks performed with the Skill.

Unifying/Subdividing The Skill: In some games, a standard Skill may not provide enough detail or may cover too many tasks; in others, it may be too precise or subdivided for the campaign. This section discusses how to expand the Skill to make it more detailed, or "compact" it so it's broader (and thus easier to buy and use, even if not as "realistic").

The Skill By Genre: This section reviews how the Skill works in various popular genres, including Cyberpunk, Dark Champions, Fantasy, Pulp, Science Fiction, Superheroes, and sometimes more. If necessary it provides genre-specific information and rules to supplement the rules described in the main text above. Of course, in some cases all that needs to be said is that a Skill functions the same in every genre.

THE DEVIL'S IN THE DETAILS

The Skill descriptions in this chapter are detailed, often *very* detailed, compared to the ones in the *HERO System 5th Edition, Revised* rulebook. For example, the Security Systems description in this book is 150 times as long as the one in the main rulebook. While that level of detail is necessary in an Ultimate book, and is useful for many types of campaigns, it may not be needed in some campaigns. For example, in many *Pulp Hero* games the emphasis on cinematic action, fast-paced heroics, and competent heroes mean you can handle most situations with a simple die roll. Minutely examining the ways to use a Skill and applying lots of modifiers not only isn't necessary, it might even detract from the feel of the game. So, in short: use the detailed information when it's helpful and appropriate, ignore it when it's not. The GM is always free to discard (or expand upon) anything in this book to suit himself and his campaign.

ACROBATICS

Type: Agility Skill (roll: 9 + (DEX/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

This Agility Skill allows a character to perform flips, jumps, and rolls like a circus acrobat. Acrobatics enables a character to jump from one moving vehicle to another safely, swing from flagpoles, bounce off awnings, and execute other tricky moves. A character with Acrobatics could jump and flip over an obstacle and land on his feet ready to fight. Lastly, characters with Acrobatics typically possess knowledge of their craft — they can identify different acrobatic maneuvers by name (if appropriate), know the identities and accomplishment of famous acrobats, and so forth — though the GM may rule this doesn't apply to characters who buy the Skill to represent an innate or intuitive ability rather than something learned through training.

Acrobatics does not allow a character to balance on narrow ledges or tightropes, quickly stand up from a prone position, diminish the effects of falls, or keep his footing on slick surface. Those abilities are functions of Breakfall (page 87).

Functions Of Acrobatics

The most common uses for Acrobatics, or situations in which characters need to use it, include:

BOUNCING

A character with Acrobatics has a lot of opportunities to interact with his environment in creative ways. Most commonly, he can find flexible surfaces to bounce off to gain more altitude, hurtle back at a villain in a surprise maneuver, and so forth. You can represent this as a bonus to the character's Leaping when he makes an Acrobatics roll under specific circumstances. A character who intelligently and correctly uses "bouncing" can move faster and farther than normally expected, sometimes allowing him to go what would have been a Full Move's worth of distance and then still take a combat action, or permitting him to close the distance to a target or rescuee before the bad guys realize what he's doing.

In any such situation, the GM decides whether there are flexible surfaces in the hero's vicinity, what directions they can launch a character, and so forth. To use them, a character must make a successful Acrobatics roll for each bounce. Each bounce gives the character additional inches of Leaping. Some surfaces are difficult to use this way and impose penalties to the Acrobatics rolls. (See the accompanying table for details.)

The "Direction of Movement" column is only a general indicator of direction. Someone leaping onto a diving board, for instance, can bounce straight up, up and forward, up and backward, up and to the side, and so on.

THE SKILL LIST

Skill	Type	Base Roll	Base/+1 Cost	Period
Acrobatics	Agility	9+(DEX/5)	3/2	All
Acting	Interaction	9+(PRE/5)	3/2	All
Analyze	Intellect	9+(INT/5)	3/2	All
Animal Handler	Interaction	9+(PRE/5)	2/2	All
Autofire Skills	Combat	—	Varies	Modern, Future
Breakfall	Agility	9+(DEX/5)	3/2	All
Bribery	Interaction	9+(PRE/5)	3/2	All
Bugging	Intellect	9+(INT/5)	3/2	Modern, Future
Bureaucratics	Interaction	9+(PRE/5)	3/2	All
Climbing	Agility	9+(DEX/5)	3/2	All
Combat Driving	Agility	9+(DEX/5)	3/2	All
Combat Piloting	Agility	9+(DEX/5)	3/2	Modern, Future
Combat Skill Levels	Combat	—	Varies	All
Computer Programming	Intellect	9+(INT/5)	3/2	Modern, Future
Concealment	Intellect	9+(INT/5)	3/2	All
Contortionist	Agility	9+(DEX/5)	3/2	All
Conversation	Interaction	9+(PRE/5)	3/2	All
Cramming	Intellect	—	5/—	All
Criminology	Intellect	9+(INT/5)	3/2	All
Cryptography	Intellect	9+(INT/5)	3/2	All
Deduction	Intellect	9+(INT/5)	3/2	All
Defense Maneuver	Combat	—	Varies	All
Demolitions	Intellect	9+(INT/5)	3/2	Modern, Future
Disguise	Intellect	9+(INT/5)	3/2	All
Electronics	Intellect	9+(INT/5)	3/2	Modern, Future
Fast Draw	Agility	9+(DEX/5)	3/2	All
Forensic Medicine	Intellect	9+(INT/5)	3/2	Modern, Future
Forgery	Intellect	9+(INT/5)	2/2	All
Gambling	Intellect	9+(INT/5)	2/2	All
High Society	Interaction	9+(PRE/5)	3/2	All
Interrogation	Interaction	9+(PRE/5)	3/2	All
Inventor	Intellect	9+(INT/5)	3/2	All
Knowledge Skill	Background	11*	2/1*	All
Language	Background	—	1/1	All
Lipreading	Intellect	9+(INT/5)	3/2	All
Lockpicking	Agility	9+(DEX/5)	3/2	All
Martial Arts	Combat	Varies	Varies	All
Mechanics	Intellect	9+(INT/5)	3/2	Modern, Future
Mimicry	Intellect	9+(INT/5)	3/2	All
Navigation	Intellect	9+(INT/5)	2/2	All
Oratory	Interaction	9+(PRE/5)	3/2	All
Paramedics	Intellect	9+(INT/5)	3/2	All
Penalty Skill Levels	Combat	—	Varies	All
Persuasion	Interaction	9+(PRE/5)	3/2	All
Power	Varies	9+(CHAR/5)	3/2	All
Professional Skill	Background	11*	2/1*	All
Rapid Attack	Combat	—	5/—	All
Riding	Agility	9+(DEX/5)	3/2	Fantasy, Modern
Science Skill	Background	11*	2/1*	All
Security Systems	Intellect	9+(INT/5)	3/2	All
Seduction	Interaction	9+(PRE/5)	3/2	All
Shadowing	Intellect	9+(INT/5)	3/2	All
Skill Levels	—	—	Varies	All
Sleight Of Hand	Agility	9+(DEX/5)	3/2	All
Stealth	Agility	9+(DEX/5)	3/2	All
Streetwise	Interaction	9+(PRE/5)	3/2	All
Survival	Intellect	9+(INT/5)	2/2	All
Systems Operation	Intellect	9+(INT/5)	3/2	Modern, Future
Tactics	Intellect	9+(INT/5)	3/2	All
Teamwork	Agility	9+(DEX/5)	3/2	All
Tracking	Intellect	9+(INT/5)	3/2	All
Trading	Interaction	9+(PRE/5)	3/2	All
Transport Familiarity	Background	—	Varies	All
Two-Weapon Fighting	Combat	—	10/—	All
Ventriloquism	Intellect	9+(INT/5)	3/2	All
Weapon Familiarity	Combat	—	Varies	All
Weaponsmith	Intellect	9+(INT/5)	2/2	All

*: Characters can base these Skills on a Characteristic (usually INT).

BOUNCING

Surface	Leaping Bonus	Direction of Movement	Acrobatics Penalty	Where Found
Awning	+2"	Upward	+0	Downtown, residential, shopping malls
Banner (Huge)	+2"	Out From Face	-2	Shopping malls, parade routes
Billboard	+2"	Out From Face	+0	Everywhere
Diving Board	+4"	Upward	+0	Swimming pools
Flagpole	+3"	Opposite Angle of Approach	-2	Downtown, government buildings, some homes
Power/Phone Line	+4"	Opposite Angle of Approach	-4	Everywhere
Tent	+2"	Upward	-2	Campgrounds, fairgrounds

Example: *Freedom Fighter is in combat with Splatter, a knife-wielding villain, who's chasing him all over downtown.*

Freedom Fighter (Leaping 18") announces, "I'm going to delay my next movement so it takes place at almost exactly the same time as his, giving him the opportunity to pursue me at almost hand-to-hand distance. I'm going to head toward the nearest set of telephone poles on the ground, leap up into the air at the wires, and try to bounce off the wires right back into Splatter's face as a Surprise Move."

The GM says that's possible on this Phase. He has Freedom Fighter make his Acrobatics roll at the -4 penalty for using the telephone wires; even with the penalty, Freedom Fighter makes it by 2. The GM then makes Splatter's PER Roll to see if Splatter detects or anticipates the surprise maneuver; he gives him a -2 penalty (because Freedom Fighter has an excellent Acrobatics roll) and another -2 (because Splatter is indeed following Freedom Fighter too closely to react well). Splatter misses his roll.

Freedom Fighter bounds to the wire, bounces up to them, inverts, hits it with his feet, and bounces straight back at Splatter. His movement rate is 22" (18" for his Superleap, +4" for the bonus from the wire), giving him +7d6 to his Move Through.

The GM can use any method he chooses to determine whether there are flexible surfaces in the hero's vicinity. Typically, downtown city buildings have at least one or two flagpoles and awnings each, and other city areas also often plenty of resources for bouncing; outside city areas, bouncing may become more difficult due to lack of opportunity. He can have the character make a Luck roll to determine whether a particular building has any flexible features (or more than normal), with results other than a 6 indicating the pickings are pretty sparse.

Characters who like to use these bouncing rules may tend to ask for incredible amounts of information about local architectural details when they're in combat. It's best to settle the question of whether there are flexible surfaces nearby very quickly, such as with a Luck roll.

COMBAT

Acrobatics doesn't just impress bystanders — it's useful in combat. An acrobat can often gain +1 to +3 to his OCV by surprising his opponent with an acrobatic maneuver (the GM determines this bonus; see *Surprise Move* on page 381 of *The HERO System 5th Edition, Revised*). In situations where the GM believes a Surprise Move bonus should apply, a good rule of thumb is +1 OCV for every 3 full points by which the Acrobatics roll succeeds (*i.e.,* +1 if the character makes his roll by 3-5, +2 if he makes it by 6-8, and +3 if he makes it by 9 or more). (The GM may alter this bonus as he sees fit.) This bonus applies to the character's next attack against that foe, which must occur in the Phase in which he made the roll. If he doesn't attack that foe that Phase (for whatever reason), he loses the bonus.

Similarly, in some cases a character's prowess as an acrobat allows him to dodge attacks more easily than others can. Typically characters who want this ability have to buy it as DCV Combat Skill Levels with the *Requires An Acrobatics Roll* (-½) Limitation. However, in some cases the GM may allow a character who's performing a Dodge or Martial Dodge to make an Acrobatics roll and gain a bonus to his DCV equal to the OCV bonus described above.

If the GM uses either of these rules, a badly failed roll — by 4 or more — may, at his option, subject the character to corresponding OCV or DCV *penalties.*

NEGATING COMBAT PENALTIES

Characters can use Acrobatics to negate some OCV and DCV penalties.

Being Bound

A character with Acrobatics can negate the effects of being bound for each Phase he succeeds with a Skill Roll. If the character's hands are bound in front, he receives a -1 to Acrobatics; if his hands are bound in back, he receives a -3; if his feet are bound apart, he receives a -2; if his feet are bound together, he receives a -5; and combinations of the above are cumulative (*i.e.,* hands bound in back and feet bound together mean a -8). Each Phase the character must make his Acrobatics roll at the listed penalties; if the roll succeeds, he can ignore the OCV and DCV penalties normally imposed by being bound during that Phase.

Being Prone

A character who hasn't been able to keep his feet for some reason — typically because he's been thrown, Knocked Back/Down, or the like — can

use Acrobatics to keep himself from becoming vulnerable while prone. Once he's prone, if he can succeed with an Acrobatics roll by half, he has his full DCV (instead of the normal ½ DCV for being prone). If he fails his half-roll, he suffers the normal ½ DCV penalty for being prone. But on his next Phase, he can attempt another Acrobatics roll; if he succeeds normally (not by half), he has his full DCV even while remaining prone.

RIDING AND VEHICLES

Skilled equestrians often know how to perform stunts while on horseback (or griffinback, whaleback, or what have you). They can perform handstands and other maneuvers on a fast-moving mount, lean out of the saddle and pick things up off the ground without falling off or damaging the object, and so forth. They use Acrobatics to perform these tricks. If a character can only perform such stunts while on a mount, he takes a -1 Limitation, *Only While Riding,* on the Skill.

With the GM's permission, an agile, fast-moving flying Vehicle could redefine Acrobatics as *Aerobatics* and use it to perform barrels rolls and other aerial "stunts." In that case, the GM should restrict Combat Piloting to aerial maneuvers that impose no more than a -3 penalty on the Skill roll; more difficult maneuvers require Aerobatics. (Characters using Aerobatics still suffer the penalty, though possibly at a reduced level; it's just that having the Skill is necessary even to attempt them.) Alternately, Aerobatics can simply serve as a Complementary Skill for Combat Piloting for Vehicle Maneuvers (see *The Ultimate Vehicle*) in some cases.

BEING THROWN

A character can use Acrobatics to resist being thrown by any Combat Maneuver that's supposed to throw him to the ground (including both Martial Maneuvers with the "Throw" element and the good old Grab and Throw combination). With a successful Acrobatics roll at a -3 penalty, the character keeps his feet and is not thrown down. This means he doesn't suffer the DCV or "initiative" penalties for being thrown.

However, this doesn't keep him from taking damage from the Throw maneuver. Some Throws are fist-strikes hard enough to take a character off his feet; others are leg-sweeps where some of the damage comes from the attacker's blow to the backs of the character's legs; the standard Grab and Throw slams a character hard onto the ground, even if he makes his Acrobatics roll and keeps his feet. Therefore, even if the character succeeds with his Acrobatics roll at -3 and keeps his feet, the character takes full damage from the Throw maneuver.

Characters can also use Breakfall to avoid some effects of Throws (see page 71). However, a character cannot perform a Breakfall roll and an Acrobatics roll in the same Phase both to resist being thrown and to reduce the damage from being thrown — he can only use one of them against a given throw attack. However, the character could make one Acrobatics or Breakfall roll



to avoid some of the effects of the Throw, and then make a separate Breakfall roll to regain his feet instantly (without taking a Half Phase). The character could make an additional Breakfall roll by half in the same Phase to overcome the effect that the attacker (the person who threw the character) automatically gets to act first (regardless of relative DEX) if he and the attacker have their next Phases in the same Segment.

TUMBLING

A character can use Acrobatics to move by tumbling and rolling along the ground. This has the advantage of allowing him to move while remaining behind low cover, to move through openings he couldn't fit through while standing up, and so on.

To tumble in crisis conditions (such as combat), a character must make an Acrobatics roll. If the roll succeeds he can tumble at half his Running speed (*i.e.,* half his normal Combat Movement of Running constitutes a Full Move, one-fourth of his normal Combat Movement of Running constitutes a Half Move). For every 2 points by which the roll succeeds, add +1" to the Running speed from which you calculate his tumbling move (up to a maximum of his normal inches of Combat Movement with Running). While tumbling a character is not considered to be prone and has his normal DCV; in some cases the GM may even grant a small (no more than +2) bonus to a tumbling character's DCV. If the roll fails, the character has wasted a Half Phase Action and ends up prone in the hex he started tumbling in.

RUNNING UP WALLS

Characters can use Acrobatics to execute the common martial arts movie stunt of running a short distance up a wall and then backflipping off to land behind a pursuing foe. To do this a character has to make a Half Move up to a wall (*i.e.,* he has to Run at least 1" up to the wall) and make an Acrobatics roll. If the roll succeeds, he "runs" up the wall no more than 2" and then makes the flip, landing up to 3" away from the wall (his choice of where to land) and facing it. If the roll fails, he runs into the wall (but doesn't hurt himself), fails to land properly after the flip, slips and falls while "running" up the wall, or the like. If it fails badly (by 4 or more), the GM should roll on the Failed Acrobatics Rolls table

Alternately, a character doesn't need to backflip off the wall at all — he can simply use Acrobatics to "run" up to 2" up a wall. (At the GM's option, you can increase this by +1" for every 2 points by which the Acrobatics roll succeeds.) This allows him to get to low rooftops, high windows, overhangs, and the like. (The GM may require the character to make a DEX Roll to grab hold of these objects or "hit" his "target.") However, if the character hasn't reached a safe surface or something he can grab hold of by the end of the "run," he falls to the ground.

Other Information

MOVEMENT

No use of Acrobatics inherently involves taking, or gaining the benefits of, a Half Move or Full Move. Of course, a character can choose to make a Half Move prior to using Acrobatics (and often after doing so, since many uses of Acrobatics are Actions that take no time).

EQUIPMENT

Acrobatics doesn't involve or require any equipment; it's purely a personal Skill.

POWERS AND ACROBATICS

Acrobatics interacts with several of the Powers in unusual ways.

Characters with some forms of Flight can sometimes use their power to mimic certain aspects of Acrobatics. For example, maybe they could turn themselves in mid-air in such a way as to make some observers think they were performing acrobatic flips. With the GM's permission, a flying character can make an Acrobatics roll to reduce his Turn Mode with Flight. This is a Zero Phase Action performed right before moving and costs 1 END. For every 2 points by which he makes his Acrobatics roll, he can reduce his Turn Mode by 1 (to a minimum of 1"). For example, suppose a character has Acrobatics 13- and a Turn Mode of 5". If he rolls an 11 or 10, he can reduce his Turn Mode to 4"; if he rolls a 9 or 8, he reduces it to 3", and so on. A character cannot reduce his Turn Mode below 1" using Acrobatics.

In many genres, particularly Martial Arts, characters often buy extra inches of Leaping with the *Requires An Acrobatics Roll* (-½) Limitation. This reflects their ability to use their acrobatic prowess to improve their momentum when

FAILED ACROBATICS ROLLS

Roll 1d6	Result
1	*Embarrassment:* The character looks so foolish that he suffers -2d6 on all Presence Attacks against anyone who saw him for the next Turn.
2-3	*Sprains And Strains:* The character sprains, twists, or otherwise injures part of his body; he suffers a Drain DEX or Running (GM's choice, or may substitute some other appropriate ability) 2d6 with a Delayed Return Rate (points return at the rate of 5 per 20 Minutes).
4-5	*Minor Injury:* The character lands badly, smacks into something solid, or the like. He takes 1d6 of d6 of Normal Damage against which only his natural PD and any other innate defenses (*i.e.,* not Force Fields, worn armor, or the like) apply.
6	*Serious Injury:* The character may have broken a bone, torn a ligament, or otherwise seriously hurt himself. He takes ½d6 of d6 of Killing Damage against which only his natural PD and any other innate defenses (*i.e.,* not Force Fields, worn armor, or the like) apply.

jumping, and perhaps to put a little extra "spring" in their leg muscles. (This may also apply to other powers, such as Missile Deflection defined as "super-dodging.")

CONSEQUENCES OF FAILURE

Typically a failed Acrobatics roll simply means the character's attempt to perform a particular acrobatic maneuver fails. He may look foolish or inept, but that's the worst that occurs. But sometimes failure can have dire consequences. If the character fails an Acrobatics roll to, for example, jump from one moving vehicle to another or flip and catch hold of a trapeze, failure may mean a long and deadly fall. Failure when using Acrobatics in combat to obtain OCV or DCV bonuses can result in penalties instead, as described above.

If a character fails an Acrobatics roll badly (by 4 or more) then he may, at the GM's option, hurt or hinder himself. The GM can use the accompanying table to randomly determine what happens, or simply choose a result (in the latter case, the worse the failure, the worse the result is likely to be).

BASE TIMES

Most uses of Acrobatics, such as performing a maneuver to gain combat bonuses or to bounce off flexible surfaces, are Actions that take no time (or, at worst, Zero Phase Actions). If the character performs an activity that requires ongoing effort or concentration (such as tumbling along the ground), the GM might consider the use of Acrobatics as a Half Phase Action, but even in those cases it's usually only a Zero Phase Action.

SUBDIVIDING ACROBATICS

If you think that Acrobatics provides too many benefits to be a single Agility Skill, you can split it up into three Agility Skills: Bouncing (which allows characters to "bounce" off flexible surfaces, as described above); Combat Acrobatics (which provides combat bonuses and ability to negate combat penalties); and Acrobatics (which includes all other uses of this Skill).

ACROBATICS BY GENRE

Acrobatics works the same in all genres. It's not particularly common in some genres (such as Western), but functions the same regardless.

Pulp

In campaigns that emphasize Air Adventure, the GM should strongly consider using the optional *Aerobatics* form of Acrobatics (see above).

Superheroes

Some metamorphs can change form so rapidly they can easily avoid obstacles others characters have to face. Acrobatics might not let them actually do a flip, but it allows them to rearrange their bodies quickly enough to accomplish the same result. While a circus acrobat swings from a flagpole using a tether, a metamorph might just extend a body part and wrap it around the flagpole. In combat, a metamorph might use Acrobatics to represent the way his malleable limbs let him attack in unexpected ways (*i.e.,* obtain a *Surprise Move* bonus).

ACTING

Type: Interaction Skill (roll: 9 + (PRE/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

This Interaction Skill enables a character to alter his physical mannerisms and speech patterns to seem to be another person, to fool someone, or to fake moods and emotions. Characters can use it to hide their true identity or to impersonate another individual. However, it doesn't allow a character to alter his appearance (that requires Disguise) or to imitate another person's voice (that requires Mimicry). Area Knowledge, Mimicry, and Disguise can all help the character impersonate someone, or even act as Complementary Skills for Acting, depending on the circumstances.

If a character has received formal acting training, Acting also imparts some knowledge of related subjects: techniques and styles of acting (such as the Method school); famous thespians; the business of acting; and so forth. If the Skill represents an innate talent for acting, then he may not know these things.

Acting is an Everyman Skill for all genres.

IMPERSONATING OTHERS

The first, most basic use of Acting is to act like someone else — either to impersonate a specific individual, or to change the character's own personal mannerisms so he can adopt an alternate identity, hide from pursuers, or the like. A successful Acting roll allows him to do this. Many modifiers can apply to this roll; see the Acting Modifiers table for examples.

Detecting Acting

Of course, even if a character succeeds with his Acting roll, he may not always fool other people. When a character uses Acting and other people have reason to suspect he's Acting, they may use their INT Rolls (or Acting, if they have it and prefer to use it) in a Skill Versus Skill Contest to determine that his mannerisms aren't natural. In some circumstances the GM may even let a character try to "detect Acting" when someone isn't literally using Acting but is not "acting right" — for example, when that person has been possessed by a spirit, subjected to Mind Control, or replaced by a monster that's imitating his shape.

FAKING EMOTIONS

A character can also use Acting to make it seem that he's experiencing emotions he doesn't really feel — for example, to fake grief at the death of someone he doesn't really care about. The more extreme the emotion, the harder it is to fake, as indicated on the Acting Modifiers table. Additionally, the longer the character has to maintain the false emotional state, the harder it is to do so.

Fooling Telepathy

An exceptionally skilled actor may be able to fool Telepathy that does not dig past surface thoughts. To do this a character needs at least 1 Minute of preparation time to "get into character"; if he has less than

that, he suffers a -2 or greater penalty to his Acting roll. When he's attacked with Telepathy, he must make an Acting roll at -4 (plus any other applicable penalties). If he succeeds, a reading of his surface thoughts shows him to be the individual he's impersonating (deeper probes reveal who he really is; Acting can't alter deep, hidden thoughts or memories). If he fails, the character using Telepathy can (a) read his true surface thoughts, and (b) realizes the character was trying to trick him with Acting.

FAKING INJURIES

A character can use Acting to simulate a greater injury than he's actually received. This may make his opponent overconfident and allow the character to make a Surprise Move attack. This requires a Skill Versus Skill Contest pitting the character's Acting against the target's PER Roll. The GM decides, based on how clever he feels the ploy is and how likely the target is to believe it (the *Overconfidence* Psychological Limitation usually comes into play here), what modifiers (if any) apply to the character's Acting roll. If the ploy isn't really clever, the target knows the character fakes injuries frequently, or the target makes his PER Roll by more than the character makes his Acting roll, the character gets no OCV bonus. (In fact, the GM may give the *target* an OCV bonus, since the Acting character probably has to reduce his mobility [and hence his DCV] to make a fake injury look convincing.)

If the character wins the Contest, the GM has to decide how much of a Surprise Move bonus to award him. This depends on how much he won the Contest by (usually a +1 bonus for every two full points by which he wins, with a minimum of +1 and a maximum of +3), how clever the GM judges the ploy to be, and so forth.

Some animals have this as an Everycreature Skill to reflect their ability to seem fiercer than they are, fake an injury to lure a predator away from their nests, and so forth.

FAKING SKILLS

In some situations, a character may be able to use Acting to convince people he has another Skill he doesn't really have (or that he's better at a Skill he does have than he really is). This won't work with Skills a character uses directly against another person (Combat Skill Levels, Conversation, Persuasion, and so on); typically it works best with High Society and various Technological Skills. Faking a Skill can never give a character any actual ability in a Skill beyond what he already has (if any). He just makes it look to other characters as if he knows (and can do) more than he really does.

If the character's Acting roll succeeds, other people *think* he's good enough to have a roll of about 11- in the Skill (in other words, he could use it professionally). For every 2 points by which the Acting roll succeeds, increase the character's perceived level of ability by +1 to the Skill roll. If the roll fails, the character exposes himself as a fraud; if it fails badly (by 4 or more) his pretend actions may cause some real harm.

ACTING MODIFIERS

These modifiers apply to a character's Acting roll, not to any INT Rolls or other rolls to detect that he's acting.

GENERAL MODIFIERS

Modifier	Length Of Acting
	Character maintains impersonation/false emotion/fake Skill for a long time
-1	Up to 1 Hour
-2	1.1 to 6 Hours
-3	6.1 Hours to 1 Day
-4	1.1 Days to 1 Week
...and so on	

DETECTING ACTING

Modifier	Circumstances
	Character has studied person being impersonated...
+1	...for at least 6 Hours
+2	...for at least 1 Day
+3	...for at least 1 Week
+4	...for at least 1 Month
...and so on	
	Impersonating a specific person
+2	Person being impersonated is completely unknown to onlooker
+1	Onlooker has heard of person being impersonated
+0	Person being impersonated is vaguely known by onlooker
-1	Person being impersonated is an acquaintance of onlooker
-2	Person being impersonated is known to onlooker
-3	Person being impersonated is well known to onlooker

FAKING EMOTIONS

Modifier	Strength Of Emotion
+0	Mild
-1	Strong: anger; happiness
-2	Intense: rage; sadness to the point of crying
-3	Very Intense: berserk fury; profound grief or depression

EQUIPMENT

Acting doesn't involve or require any equipment; it's purely a personal Skill.

POWERS AND ACTING

Various Mental Powers may help a character use Acting, or render it unnecessary. A little bit of Mind Control may make a target more likely to believe the character's not acting. A touch of Telepathy can pull details about someone from a target's mind, making it easy to impersonate that person to the target. In either case, the character has to achieve the +20 "victim does not know his mind is being read" level of effect, or else he'll tip off the subject.

CONSEQUENCES OF FAILURE

Failing an Acting Roll usually means the acting was not convincing and the viewers saw through the impersonation. However, in some cases, it may just make the viewers suspicious or distrustful of the character. A badly-failed roll (by 4 or more) exposes the character to significant distrust and/or embarrassment.



BASE TIMES

Acting is a fairly time-intensive task — to convincingly impersonate another individual, or a false emotion, the character may have to use Acting for a long period of time. Even something simple, like faking an injury, requires a minimum of a Half Phase Action.

A more important question is now often the character has to make Acting rolls to maintain his portrayal. For a short-term task, such as faking an injury, or faking an emotion long enough to trick someone into leaving the room, one Acting roll suffices. For a long-term task, such as adopting an alternate identity for several hours or days, the GM needs to establish a reasonable time period for rolls. One roll per Hour may be a good guideline in many cases. Additionally, if the character impersonates another character, the GM may also require him to make rolls whenever he encounters someone who knows the person being impersonated.

SUBDIVIDING ACTING

Acting is a fairly restricted Skill and so probably doesn't need to be split into multiple Skills for most campaigns. In games where acting and impersonation are key elements, GMs may want to divide it into two Interaction Skills: Impersonation (used to imitate other people and emotions, and to act in general) and Combat Acting (for faking injuries and Skills).

ACTING BY GENRE

Generally speaking, Acting works the same in all genres, but special considerations apply in a few.

Fantasy

In Fantasy worlds featuring unusual non-Human races, the rules described below for aliens in Science Fiction settings may apply. It may not be any easier for a character to impersonate one of the Dragon-Lords of Tarkine than to impersonate an Arcturan bog-being.

Martial Arts

Characters can use Acting to imitate another character's personal fighting style. This ability doesn't necessarily have much use in combat, but may crop up in other situations. For example, suppose a villain with Acting wants to frame a PC for a crime. He could Disguise himself as the PC, then perform some heinous crime before witnesses who swear it was the hero — they didn't just recognize his face, they recognized his moves. This requires a Skill Versus Skill Contest pitting the villain's Acting against the INT Rolls of onlookers familiar with the real person. To do this, the actor must know at least two Martial Maneuvers in the same style as the person he's mimicking. If the actor is a karateka and wants to imitate a jujutsuka, but he doesn't have any Jujutsu maneuvers, he's out of luck. A Knowledge Skill of the imitated character's style serves as a Complementary Skill Roll to both the Acting roll and the INT Roll to perceive the trickery.

Science Fiction

Characters may have difficulty acting like members of another species, since aliens are, well, *alien*. When a character impersonates a member of a species other than his own to a character who knows what members of that species are like, he suffers a -2 to -5 penalty to his Acting roll. He can eliminate this penalty by buying bonuses to Acting *Only To Impersonate [Species]* (-1), or by succeeding with a KS: [Species] roll. Gamemasters may also wish to impose some of the penalties from the Disguise Modifiers Table (page 174) on Acting rolls.

ANALYZE

Type: Intellect Skill (roll: 9 + (INT/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

This Intellect Skill allows a character to analyze another character's abilities or skills to determine the other character's level of power or degree of competence. The character must specify what he can analyze using this Skill when he buys it; the text below discusses several examples.

You should take care not to let Analyze take the place of other Skills. If a Skill already allows a character to compare two or more things or to conduct an analysis of something to reach a conclusion, there may be no need for a related form of Analyze. For example, the Skill *Analyze Crime Scene Evidence* isn't really needed for anything (except maybe Complementary Skill rolls) because the *Criminology* Skill already allows characters to analyze trace evidence that way.

BASIC ANALYZE RULES

Using Analyze typically requires a minimum of a Half Phase Action, though it can take longer, and some specialized forms of Analyze indicate a longer Base Time (such as the 1 Turn for Analyze Style). See *Base Times,* below, for further discussion.

After sufficient observation of the target the character can make his Skill Roll. If the Analyze roll succeeds exactly, the character has a general idea of how skilled or powerful the target is in comparison to him ("He's better than me," "I could do better than him easily"). If he makes his Analyze roll by 1 or 2, he knows where, how, and by whom the target was trained or manufactured (if applicable). If he makes his Analyze roll by 3 or more, he can discover distinctive mannerisms about the target which grant him +1 DCV against any attacks (or -1 on Skill Versus Skill rolls) made by the target. If the character makes his Analyze roll by half or more he gains +2 for all relevant rolls against the target (this bonus is equivalent to two Overall Skill Levels; the character may assign the bonus as he sees fit from Phase to Phase). An appropriate Knowledge Skill may serve as a Complementary Skill roll.

In some cases, characters can use Analyze to identify the ability an opponent is using. For example, as discussed under *Analyze Magic* below, with a successful roll a spellcaster who watches a spell being cast can identify the spell and knows its effects.

Analyze in its various forms often works as a Complementary Skill (and in fact some characters buy it primarily for that purpose). For example, Analyze Style might be Complementary to Gambling when a character bets on boxing, and Analyze Vehicle would help with Mechanics when the character works on a car or airplane.

Characters can buy Lack Of Weakness to protect against Analyze. Every -1 to all Analyze rolls costs 1 Character Point. See below regarding Analyze and Find Weakness.

Duration Of Effects; Successive Rolls

The bonuses and exact knowledge gained by using Analyze last only for the encounter in which Analyze was used. They do not "carry over" to future encounters. The character may retain the general knowledge (like "I'm better than him" or "Master Po trained him") — but never any bonuses. However, at the GM's option, a character who's succeeded with an Analyze roll against a target previously may receive a +1 or greater bonus to Analyze rolls made against that same target in later encounters — his familiarity with the target's techniques, nature, or abilities makes it easier to analyze him/it.

A character cannot make successive Analyze rolls against the same character in the same encounter. He only gets one try per target per encounter.

Requires A Skill Roll

Characters often use Analyze for Required Skill Rolls. In that case, if the character succeeds with his Analyze roll to activate the ability, he does not also get the standard bonuses and benefits of Analyze. Activating the ability is all he does.

BASIC ANALYZE EFFECTS

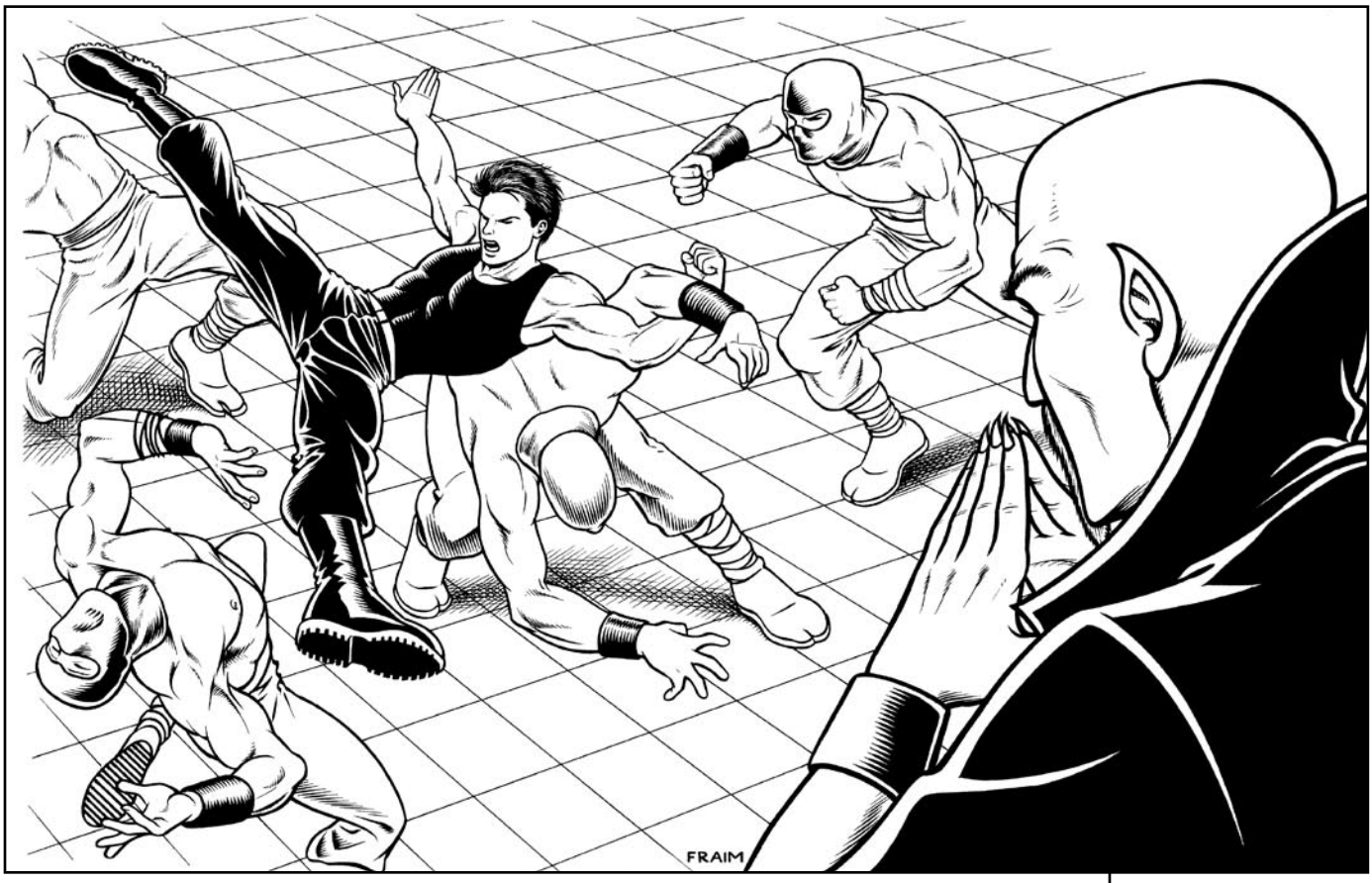
Makes Roll By	Information Gained
0 (exactly)	The character has a general idea of how skilled or powerful the target is in comparison to him ("He's better than me," "I could do better than him easily")
1 or 2	The character knows where, how, and by whom the target was trained or manufactured (if applicable)
3 or more	The character can discover distinctive mannerisms about the target which grant him +1 DCV against any attacks (or +1 on Skill Versus Skill rolls) made by the target
Half or better	The character gains +2 for all relevant rolls against the target (see text)

This table summarizes the general rules for Analyze. Specific types of Analyze discussed elsewhere in this section may have their own specialized rules for what a successful Analyze roll means.

EXPANDING ANALYZE

The GM can expand Analyze to allow a character to analyze and evaluate just about any object — buildings, technology (or specific types of technology, like computers), you name it. This allows the character to determine (a) how well-built the object is, and (b) the object's capabilities in relation to similar items he knows about. In this case, Analyze becomes a particularly useful Complementary Skill — it grants a +1 bonus to related Skill Rolls (including Find Weakness rolls) for every *1* point by which the character makes his Analyze roll.

See *Analyze Large Objects* and *Analyze Technology,* below, for examples of this type of Analyze.



Examples Of Analyze

Here are several examples of specific forms of Analyze. Unless indicated otherwise below, any benefits or abilities listed for these Analyzes are *in addition to* the basic Analyze abilities described above, and a character obtains them all with one roll. For example, if a character makes his Analyze Style by half, he both (a) knows the location of the target's open Gate (as specified for Analyze Style) and (b) gains +2 for all relevant rolls against the target (as specified in the basic Analyze rules). The GM can change this, or reduce some of the bonuses, if he sees fit.

ANALYZE COMBAT TECHNIQUE

Analyze Combat Technique is similar to Analyze Style (see below), but applies to fighting skills, combat tactics, and related abilities that don't rise to the level of a "formal" fighting art like Kung Fu or Aikido. Analyze Combat Technique functions as a Complementary Skill to Tactics in some situations (and vice-versa).

The accompanying table describes the sort of information characters typically gain from an Analyze Combat Technique roll, though the final results are up to the GM. These results follow the general pattern for the Skill as described above, but unlike Analyze Style are not in addition to those results.

ANALYZE COMBAT TECHNIQUE

Makes Roll By	Information Gained
0 (exactly)	The character has general idea of how good his opponent is in relation to himself ("He's fair/good/excellent," "He's better/worse then me," "I can't beat him unless I get lucky")
1 or 2	The character knows where/how opponent was trained (has been in the Green Berets; has had marksman or sharpshooter training; or the like). If the foe has not had any recognizable training, the character cannot find anything out about him this way.
3 or 4	The character can discover distinctive mannerisms about the opponent which allow the character +1 DCV against that foe's attacks (foe tends to fire to the left; foe has a hard time hitting targets more than 10" away, or the like)
Half or better	The character can figure out so much about the opponent's fighting tactics that he gets a +2 CV against the foe. This is equivalent to two 8-point Combat Skill Levels, and can apply to OCV or DCV, at the character's option.

ANALYZING LARGE OBJECTS

Made Roll By	Results
Exactly	Character's lifting capacity increases by 10% for purposes of lifting, or causing damage to, the object at this time; any damage prevention points the character gains are increased by 10%
1-2	Character's lifting capacity increases by 20% for purposes of lifting, or causing damage to, the object at this time; any damage prevention points the character gains are increased by 20%
3 or more	Character's lifting capacity increases by 30% for purposes of lifting, or causing damage to, the object at this time; any damage prevention points the character gains are increased by 30%
Half or better	Character's lifting capacity increases by 40% for purposes of lifting, or causing damage to, the object at this time; any damage prevention points the character gains are increased by 40%

ANALYZE LARGE OBJECTS

Super-strong characters in *Champions* and other high-powered genres ("bricks") sometimes learn how to apply their STR more effectively — either to lift a large object without breaking it, or to destroy a large object more easily. The accompanying table describes some general parameters for the use of Analyze pertaining to large, inanimate objects; see the *Hoist* Skill, page 361, for an explanation of "damage prevention points."

For characters who don't need to lift things you could convert this Skill into, for example, Analyze Construction. That Skill would allow a character to figure out the best way to damage or blow up buildings (and perhaps other large manufactured objects). Among other things, it would serve as a Complementary Skill for certain Demolitions rolls.

ANALYZE MAGIC

Analyze Magic is a valuable Skill in campaigns that feature lots of magic, such as most *Fantasy Hero* games and some *Champions* games. It allows a character to evaluate the magical abilities and powers of a spellcasting character. Usually wizards are the only ones who know it, but it's possible for priests, rogues, or anyone else to learn to use it through direct observation.

Analyze Magic has several uses. First, a character who sees another character cast a spell can make an Analyze Magic roll to identify the spell in question and its effects (this is an Action that takes no time). The GM may impose a penalty on the roll if the character doesn't have an appropriate KS of the style of magic being used or hasn't in some way been exposed to that type of magic. Even if the character can't identify the spell and its effects precisely, he can figure out what a spell does generally (if it isn't immediately obvious). For example, an occult investigator could tell that a cult ritual is meant to summon a demon, or a sorcerer could recognize that a supposed blessing is actually a spell to influence the target's mind. The GM may impose a penalty on the roll if the character lacks an appropriate KS of the style of magic being used, or otherwise lacks experience with that type of magic.

Second, a character who can cast spells or use magic himself can employ Analyze Magic in the basic way described above: to evaluate the other character's power relative to his own, deduce who trained him, and perhaps to gain a tactical advantage over him. With a successful Analyze Magic roll, a character might identify a spellcaster's mentor or school ("Only students of the Five Elements Temple cast fireballs using that particular gesture"), his knowledge and raw power ("He says the words so sloppily! He is not trained well, for all his power..."), and perhaps even deduce secret aspects of the magic or gain a tactical advantage ("He couldn't cast such spells without a demon's help — which tells me just how to fight him!")

Analyze Magic does not allow a character to design a new spell, or operate an unfamiliar magic item; for such feats, see Spell Research (under Inventor) and Power: Magic Skill. Analyze Magic may, however, act as a Complementary Skill for such attempts. For instance, a mystic trying to reconstruct a spell he saw another mystic use has a better chance of success if he Analyzed the spell when he saw it cast.

Other Forms Of "Analyze Power"

You can use the rules for Analyze Magic to create other "Analyze Power" Skills. For example, mentalists with *Analyze Psionics* can determine the type of Mental Power another character's using, figure out who trained him (or the nature or source of his powers), evaluate the target's power relative to his own, and perhaps even obtain a tactical advantage over that mentalist. (In this case, the +1 DCV for making the roll by 3 or more becomes +1 DECV.) In a *Champions* campaign, an expert on superhumans might have *Analyze Superhuman Powers.* Astrobiologists or xenologists who study lots of different alien beings with weird powers can learn *Analyze Alien Powers* — a tremendous help when dealing with unknown creatures and strange abilities.

ANALYZE MOTIVE

With the GM's permission, characters can buy Analyze as *Analyze Motive,* the ability to evaluate another person's actions and determine his true intentions. Typically this applies when the character tries to discern whether (a) another character is lying, or (b) another character is using a subtle Interaction Skill on him (such as Acting, Conversation, or some uses of Persuasion and Seduction). The accompanying table lists the effects of a successful Analyze Motive roll.

ANALYZE MOTIVE

Makes Roll By	Information Gained
0 (exactly)	The character realizes the other person has some motive or agenda beyond what he claims or what's immediately apparent.
1 or 2	The character knows that the other person is using an Interaction Skill on him (if, in fact, he is), but not necessarily which one. He gains a +1 on any rolls to resist the Interaction Skill.
3 or more	The character can identify the Interaction Skill used on him; if the other person is lying, the character knows this (but that doesn't mean he knows what the truth is, only that a lie's being told). He gains a +2 on any rolls to resist the Interaction Skill.
Half or better	The character gains +3 on any rolls to resist the Interaction Skill.

ANALYZE SKILLS

Characters can buy Analyze to evaluate another character's Skills. They have to buy it by Skill category or specific Skill: Analyze Agility Skills, Analyze Interaction Skills, Analyze Knowledge Skills, Analyze Demolitions, and so on. The basic rules for Analyze apply, though the GM should adjust them as appropriate. For example, the +1 DCV for making the roll by 3 or more becomes a +1 to the character's roll in Skill for Skill Versus Skill Contests against the target. In some cases, determining where or how a character learned a particular Skill may not be possible; not every Skill involves distinctive mannerisms or opinions a character might pick up from a teacher or school.

ANALYZE STYLE

Analyze Style allows a character to assess an enemy's fighting skills (*i.e.,* his Martial Arts and related abilities). He may only use it after watching the enemy fight — he must observe his target fighting for at least one full Turn before he can make a Skill Roll. The information the character gains from an Analyze Style roll depends on how well he succeeds, as indicated in the accompanying table. A character with Analyze Style gets a +2 to his Skill Roll if his target possesses a *Style* Distinctive Feature (see *The Ultimate Martial Artist,* page 135).

Analyze Style also allows a martial artist to take advantage of an opponent's consistency. Some characters tend to favor one or two attack maneuvers, usually because they offer high damage capabilities or some advantageous combination of CV bonuses. In this situation, a character can make an Analyze Style roll to prepare himself for this favored attack. If he succeeds with the roll, he gets +2 DCV against that maneuver in this particular fight. (With the GM's permission, characters can also use KS: Specific Martial Art this way.)

ANALYZE STYLE

Makes Roll By	Information Gained
0 (exactly)	The character knows whether the target is a poor, medium, good, or master-level fighter.
1 or 2	The character knows how the target compares to the character in terms of fighting prowess ("I'm far superior to him," "It would be a close thing but I think I'd win," "It's anybody's guess who would win," "He has the edge over me," or "I don't stand a chance.")
3 or 4	The character knows certain Physical Limitations and Vulnerabilities possessed by the target (the GM decides which Limitations the Skill can detect; Lame would be, while 2 x BODY from Poisons would not be, for example).
Half or better	The character knows the location of the target's open Gate (if target has the Breath Control power described under Damage Resistance on page 122 of The Ultimate Martial Artist.)

ANALYZE TECHNOLOGY

Gadgeteers, engineers, technicians, and other characters who work with technology can buy an *Analyze* Skill to suit their talents: either Analyze Technology (which would cover any sort of technological device, but suffer penalties when dealing with more specialized forms of technology), or specialized versions like Analyze Computer, Analyze Vehicle, Analyze Robot, Analyze Alien Technology, or Analyze Weapon. Technology-based Analyzes allow a character to evaluate and determine the capabilities (and perhaps weaknesses or vulnerabilities) of the relevant technological devices. For example, a successful Analyze Vehicles roll would tell a character which of two cars was faster; an Analyze Computer roll would reveal which of two computer had faster processing speed (in game terms, a higher SPD). In both cases it's not hard for anyone to look that information up, but a character with the Skill doesn't need reference materials; his knowledge of and/or experience with the technology lets him make the correct evaluation without any outside help.

The Analyze Technology table rewrites the Basic Analyze Effects table to apply to objects. The effects it lists aren't cumulative with the effects on the Basic Analyze Effects table.

ANALYZE TECHNOLOGY

Makes Roll By	Information Gained
0 (exactly)	The character has a general idea of how skilled or powerful a technological device is compared to other such devices ("That plane is more maneuverable," "That weapon is more accurate"). If it's a device he doesn't already know about (such as a weird form of alien technology, or a Mad Science device), he knows what the device is used for in general terms ("This is a weapon," "This is a tool for working on starship engines").
1 or 2	The character knows where, how, and by whom the target was manufactured, modified, or the like (if this isn't already obvious). If appropriate, he knows exactly what the device is used for ("This is a weapon that fires a pulson energy beam tuned for special effectiveness against isokinetic force shields").
3 or more	The character can discover distinctive features about the device that grant him a +1 on Skill Rolls to use or affect it
Half or better	The character gains +2 for all relevant rolls involving the target device

EQUIPMENT

Generally Analyze doesn't require or involve equipment — it's a purely personal ability. In some settings advanced sensors could be defined with Analyze to represent their capacity for comparing and evaluating certain objects or people. For example, a character using Analyze Construction to find the "weak points" in a building so he can blow it up more easily might use ultrasound scanners, magnetic imaging, or ground-penetrating radar to examine the structure in ways he can't with the naked eye.

POWERS AND ANALYZE

If he feels it won't unbalance the game, the GM can allow a character to make an Analyze roll as a Complementary Skill Roll to a Find Weakness roll. Since Analyze is so much cheaper than Find Weakness, GMs should be wary of allowing this (or should restrict the amount of bonus to the roll that Analyze can provide), but in some circumstances it works.

Of course, an Analyze roll can only Complement a Find Weakness roll if it applies to whatever the character's trying to Find Weakness against. Analyze Style and Analyze Combat Technique, the two most common forms of Analyze in most campaigns, should never Complement Find Weakness; they involve analyzing something intangible. Analyze Vehicle wouldn't help a character make Find Weakness rolls against an enemy's powered armor or a building wall, but would Complement a roll to Find Weakness in a car, plane, or train.

CONSEQUENCES OF FAILURE

Typically a failed Analyze roll simply means the character can't learn anything about the target. A badly-failed roll (by 4 or more) may put the character in a disadvantageous position: he accidentally decides the target is better or stronger than he is; or perhaps he suffers a -1 DCV penalty for the rest of the fight because he mistook the nature of the target's martial arts skills.

BASE TIMES

Using Analyze typically requires a minimum of a Half Phase Action (and often longer) during which the character must observe the target. If the Analyze involves a particular type of ability (such as Analyze Magic or Analyze Style), the character must observe the target using that ability; just watching the target in general doesn't work. In some cases the GM may allow a character to make an Analyze roll as a Zero Phase Action. In other cases he may rule that a character has to spend a long time (many Phases, a Turn, 30 Segments, 1 Minute, or even longer) observing the target before he can make a roll — 1 Turn is a good guideline in these situations. Some of the examples of Analyze described above require specific periods of observation; for example, to use Analyze Style a character must watch the target fight using his Martial Arts for at least one full Turn.

SUBDIVIDING ANALYZE

In effect Analyze is already "subdivided," since a character has to specify what he can Analyze when he buys the Skill and can't change it thereafter. If the GM wants to make Analyze less broadly useful, he should require characters to designate the type of Analyze they have more precisely: Analyze Asian Martial Arts instead of Analyze Style; Analyze Fighter Jets instead of Analyze Vehicles; Analyze Skyscrapers instead of Analyze Construction.

ANALYZE BY GENRE

Analyze works the same in all genres, but the types of Analyze a character can buy may vary from genre to genre. Analyze Magic only works in *Fantasy Hero* games and other campaigns featuring magic, for example, and Analyze Computer is much more common in *Cyber Hero* and other genres that feature computers as a major element.

ANIMAL HANDLER

Type: Interaction Skill (roll: 9 + (PRE/5) or less)
Cost: 2 Character Points for a base roll with one category (or 1 Character Point for a base roll with a specific subcategory); each additional category or subcategory costs 1 Character Point; +1 to the roll with all categories and subcategories known per +2 Character Points

This Interaction Skill allows a character to manage and train — "handle" — animals of various sorts. A character with Animal Handler knows about the animals he's skilled at handling (their types and species, common behavior patterns, abilities, and so forth), the types of tricks an animal can learn, the best ways to teach those tricks to the animal, how to give commands to a trained animal, how to calm down a potentially dangerous animal, and so forth. However, Animal Handler does not allow a character to ride an animal; that requires Riding (page 256).

Complementary Skills for Animal Handler typically include appropriate KSs, and sometimes Riding. In a few situations Seduction (representing the character's friendly personality and winning ways) may also help.

CATEGORIES OF ANIMALS

Characters must buy Animal Handler by category — a person who knows how to train and work with dogs doesn't necessarily have any skill with bears, dragons, cats, insects, or birds. (But see *Cross-Category Compatability,* below.) The accompanying table lists the categories for easy reference. The GM may add more categories if he wants to; this is particularly appropriate for campaigns taking place in unusual environments (such as many Fantasy games, and Science Fiction campaigns involving a lot of planetary exploration).

Using Animal Handler

The typical uses for Animal Handler include training animals, getting trained animals to perform tricks, and calming down ferocious or vicious beasts.

TRAINING ANIMALS

The most common use for Animal Handler is to train animals — to teach them obedience, specific behavior patterns, or the like (collectively referred to as "tricks"). When characters want to use this ability, the GM should consider several factors.

Time Required; Animal Intellect

First, he must determine the *time* required to teach a trick to the animal. This depends on two things: the animal's intellect and the complexity of the trick. Other modifiers may also apply.

As described on page 19 of *The HERO System Bestiary,* in the *HERO System* creature intellect is defined by the *Limited Intellect* Physical Limitation, which comes in four categories: Near-Human, Animal, Instinctual, and Machine. Tricks also come in categories: Simple, Moder-

ANIMAL HANDLER CATEGORIES

Category	Example Subcategories
Aquatic Animals	Cetaceans (dolphins, whales) Fish (freshwater and saltwater, excluding sharks) Jellyfish Octopi and Squid Seals, Walruses, and Manatees Sharks
Bats	N/A
Birds	Ostriches and Emus Seabirds Songbirds Tropical Birds (parrots, toucans, and so forth) Waterfowl (This category does not include Raptors.)
Bovines	Cattle (domesticated and wild) Bison
Camels	N/A
Canines	Dogs Foxes Hyenas Wolves
Deer	Antelopes Caribou Deer Elks Llamas and Alpacas Moose Wild Sheep (bighorns, mountain goats, and the like)
Dragons	Dragons Hydrae Wyrms Wyverns
Elephants	Elephants Mammoths Mastodons
Equines	Horses Donkeys Mules Pegasi Unicorns
Felines	Housecats Great Cats (cheetahs, jaguars, leopards, lions, tigers, and so forth)
Insects And Arthropods	Ants Bees Beetles Butterflies and Moths Flies Scorpions Spiders Termites Wasps and Hornets

Continued on next page

ANIMAL INFORMATION

If you want more information about specific animals for your campaign, *The HERO System Bestiary* has hundreds of them, and rules for creating more if you want to; many of the rules printed here are also printed in that book. *Monsters, Minions, And Marauders,* the *Asian Bestiary, Vols. I-II,* and *The Celtic Bestiary* also have monstrous beasts suitable for Fantasy campaigns.

ANIMAL HANDLER CATEGORIES (CONT'D)

Category	Example Subcategories
Lagomorphs	Hares Rabbits
Monstrous Hybrids	Griffins Hippogriffs Manticores
Pigs	Pigs (domesticated and wild) Peccaries Warthogs
Primates	Apes Chimpanzees Monkeys
Raptors	Eagles Falcons Hawks Kites Vultures and Buzzards
Reptiles And Amphibians	Dinosaurs Frogs and Toads Lizards Salamanders Snakes Turtles
Rodents	Beavers Gophers Rats and Mice Squirrels and Chipmunks
Ursines	Bears
Weasels	Badgers Ferrets Minks Otters Skunks Weasels and Stoats Wolverines

ate, and Complex (see below). The accompanying table provides the Base Time (in hours or days) required to teach a trick, and the maximum number of tricks the animal can learn (the GM may, at his option, increase or decrease this number for specific animals or species).

Often the more skilled the character is, the quicker he can train an animal. For every two points by which the character makes his Skill Roll, he can reduce the time unit needed to teach the trick by one step up the Time Chart. However, the GM may, if he wishes, establish a minimum time required for any given trick. Typically Simple tricks have a minimum time of two minutes, Moderate tricks ten minutes, and Complex tricks one hour.

ANIMAL TRAINING TIMES

	Type Of Trick			
Intelligence	Simple	Moderate	Complex	Maximum Number Of Tricks
Near-Human	1 hour	2-4 hours	1-2 days	10
Animal	1-2 hours	1-2 days	3-5 days	5
Instinctual	1-3 days	4-10 days	11-21 days	2
Machine	.5-1 hour	2-3 hours	4-8 hours	10

ANIMAL HANDLER MODIFIERS

Circumstance	Modifier
Animal's age	
Very young	+1 to +3
Very old	-1 to -5
Animal's nature	
Placid	+1 to +2
Fierce	-2 to -4
Skittish	-1 to -2
Temperamental	-1 to -3
Enhanced incentives (better than normal food/treats, conditions, and so on)	+1-2
Use of pain/torture	+2-4

Example: *Marcus Flint, an intrepid explorer with Animal Handler (Canines, Equines, Felines) 14-, tries to teach a dog how to retrieve/fetch. The dog has Animal Intelligence, and the GM rules that retrieve/fetch is a Moderate trick, so this will take Marcus 1-2 days (the GM says 1 day). If Marcus makes his roll by 2, he reduces that time to six hours. If he makes it by 6, he reduces it to 20 Minutes! However, the GM rules that two hours is the minimum time required.*

If the character fails his Skill Roll, he may try again using the standard rules for failed Skill Rolls (page 17). Each attempt requires the same number of hours or days as the first attempt.

If a trick would require an animal to buy off a Disadvantage or Limitation, the animal must do this with its own Experience Points (or unspent Character Points). Until the animal does so, the Disadvantage or Limitation imposes appropriate penalties on training rolls, and the animal suffers similar penalties on its trick rolls (see below) even if a character trains it.

Animal Handler does not work on creatures without the *Limited Intellect* Physical Limitation. Such beings are too intelligent or uncontrollable for characters to train in this manner.

Training Modifiers

Second, the GM should consider any potential modifiers to the training roll. The accompanying table indicates some common modifiers to Animal Handler Skill Rolls to train creatures.

Types Of Tricks

Tricks fall into one of three categories: Simple; Moderate; and Complex. Here are some of the tricks most commonly taught to animals and their categories:

Attack (Complex): The animal attacks targets (or a specific target) when commanded to do so or when a specified condition occurs.

Domesticate (Moderate): The character "breaks" the animal, converting it from a wild beast to a trained animal that can be kept on a ranch or farm, in a home, or the like. (This isn't a "trick," exactly, but the training involved can be similar so the same rules apply.) This doesn't necessarily mean the animal isn't dangerous at all — its wild instincts may surface from time to time if it's mistreated — but it's much less dangerous to humans than it was when wild.

Entertain (Simple): The animal knows various cute or entertaining stunts or tricks, such as playing dead, rolling over, shaking hands, or saying something clever (if it can mimic human speech).

General obedience (Simple): The animal doesn't jump on the furniture when it's not supposed to, is housebroken, comes to the character on command, sits when told to, and so forth.

Guard (Complex): The animal knows how to guard a particular place or person, and how to respond if that place or person is imperiled (usually the proper response is to attack, which requires the *Attack* trick).

Herd (Moderate): The animal can herd other animals (typically sheep or cattle).

Retrieve/fetch (Moderate): The animal knows how to retrieve or fetch specific objects, such as a dead duck or a thrown ball, without hurting them. If the animal only knows how to fetch thrown balls or the like, the GM may reduce this to a Simple trick.

Stay (Moderate): The animal has been trained to stand or sit still when told to (a common ability for, among others, horses in the Wild West). Unless spooked (through a Presence Attack or like phenomena) or physically attacked or moved, the animal remains where it was told to stay until hunger and thirst get the better of it.

Stop attacking (Moderate): The animal instantly stops attacking or fighting upon command.

To indicate that an animal knows a trick, write it as an 11- Professional Skill on its character sheet (*e.g.,* PS: Retrieve/Fetch 11-). This costs the animal 2 Character Points, and it has to spend points to improve the roll.

PERFORMING TRICKS

A character should make an Animal Handler roll whenever he wants a trained animal to perform a trick or otherwise do something unusual. The character's roll acts as a Complementary Skill Roll to the animal's Professional Skill roll with its trick. If the animal's roll succeeds, it comprehends and obeys the command; if it fails, it's too confused to act or does something wrong. If it fails badly (by 4 or more) it may attack the character, run away, or do something else dangerous or extremely inconvenient.

Example: *Marcus Flint has trained his dog with the Attack trick. He can order the dog to attack an enemy in combat with a normal Animal Handler roll. If he wanted the dog to attack one specific person in a crowd, he would have to succeed with an Animal Handler roll at a penalty based on the crowd's size. For every 2 points he makes the roll by, the dog gets a +1 bonus to its PS: Attack 11- roll; for every 2 points he fails the roll by, the dog suffers a -1 penalty. After Marcus rolls, the dog has to make its PS: Attack roll to perform the trick properly.*

CALMING FEROCIOUS BEASTS

Task	Animal Handler Modifier
Get large herbivore to move out of the way	-2
Make wild animal run away	
Herbivore	-2
Hungry, dangerous carnivore	-3
Calm down wild animal so it doesn't run away	-3
Stop wild animal from attacking	-4
Stop trained guard animal from attacking	-5
Make wild animal "friendly" for a short time	-6
Make trained guard animal "friendly" for a short time	-7

These examples are only guidelines; the GM can modify them as he sees fit to represent the situation.

CALMING FEROCIOUS BEASTS

A character can also use Animal Handler to calm down wild animals and ferocious beasts belonging to any category he knows how to handle, and to accomplish similar tasks like domesticating a wild animal. This usually requires him to succeed with a roll at a -2 or greater penalty, depending upon the type of animal and its intent — getting a stubborn wildebeest to move out of the road is easier than breaking a bucking bronco, which in turn is easier than preventing a charging guard dog from attacking. (See the accompanying table for suggested tasks and modifiers.) In this sense characters can even use Animal Handler to represent a quasi-mystic "rapport" between a character and all wild creatures.

UNDERSTANDING ANIMAL COMMUNICATION

At the GM's option, a character can make an Animal Handler roll to understand what an animal in any category he knows is trying to communicate to him. "Realistically" this is a pretty limited method of "talking" — at most the character can comprehend simple "statements" such as: come here; follow me; that guy's trouble; there's danger; I'm hungry; let's play fetch; there are a lot of them; I don't like your girlfriend. But not all genres are "realistic." In some cinematic games a character may be able to learn significant amounts of information from a friendly animal or animal companion ("Rrruff!" "What's that, girl? Timmy fell down a well? Let's go save him!").

CROSS-CATEGORY COMPATABILITY

Some of the information and abilities imparted by training one category of animals may extend to other types of creatures. At the GM's option, a character with any category of Animal Handler may use the Skill on animals from another category at a -4 penalty. If the character has bought three or more categories, the GM may reduce this penalty to -3 to reflect the character's greater understanding of a wide variety of animals. The GM may also alter the penalty (up or down) to reflect the situation, common and dramatic sense, and other factors. For example, in many adventures letting a character use Animal Handler to calm down or frighten off a wild beast would make the game more fun, so the GM might allow this at only a -1 or -2 penalty even for animals in categories the character hasn't specifically learned to handle.

ANIMAL FOLLOWERS

Characters do not have to use Animal Handler to calm down animals bought as Followers; those creatures are automatically friendly to the character. Typically, animal Followers are built with tricks they already know, and/or a Language allowing them to communicate easily with the character, so that the character doesn't need Animal Handler to work with them.



EQUIPMENT

Animal Handler usually doesn't involve or require any equipment; it's a purely personal Skill. However, some trainers do use equipment — whips, shock-prods, food dispensers that respond to specific behaviors, special types of harnesses or leads — as part of the training process. The GM can treat this as a modifier to appropriate Skill Rolls (usually positive, but possibly negative; not all animals respond to the lash well).

POWERS AND ANIMAL HANDLER

A character with Mind Control or Telepathy that affects the Animal class of minds may find it easier to use them instead of Animal Handler to communicate with and/or control animals. At the GM's option, using these powers as part of the training process can reduce training time and/or negative modifiers by as much as half.

Characters don't have to use Animal Handler to control Summoned animals if the Summon has the *Amicable* Advantage. If the creature is neutral or hostile to its Summoner, then Animal Handler might be one method used to make it do what the Summoner wants.

CONSEQUENCES OF FAILURE

Failure when teaching an animal a trick usually means the animal simply didn't learn the trick; the character can try again, as discussed above. A badly-failed roll (by 4 or more) may cause the animal to turn on the character and attack him, attempt to escape, or the like. It could also mean the animal simply can't ever learn that particular trick. Failure when trying to get an animal to perform a trick is discussed above.

Failure when trying to calm an animal down (or the like) means the animal remains hostile. A badly-failed roll (by 4 or more) may cause the animal to think the character is weak or vulnerable, and thus to attack immediately.

Failure when trying to communicate with an animal means the character doesn't understand what the animal's trying to "say." A badly-failed roll (by 4 or more) may mean the character misunderstands the animal's communication, which may lead to all sorts of trouble.

BASE TIMES

The Animal Training Times table provides the Base Times for teaching an animal a trick. Getting an animal to perform a trick it knows usually requires a Half Phase Action. Trying to communicate with an animal usually takes a Full Phase, but for some simple "talks" the GM may reduce this to a Half Phase Action.

The Base Time required to calm a ferocious beast (or perform a similar task) varies. In combat or crisis conditions typically it takes a Full Phase, but in some cases the GM may rule that it takes longer, or that more than one successful roll is necessary (the Task Difficulty rules from page 32 may apply in that situation).

UNIFYING/SUBDIVIDING ANIMAL HANDLER

In some cinematic campaigns, such as some *Fantasy Hero* campaigns or high-powered *Pulp Hero* games, splitting Animal Handler into categories may not work well. In those games, GMs can allow characters to buy Animal Handler as a typical Interaction Skill (3 Character Points for a PRE-Based Roll, +1 to the roll for each +2 Character Points) and apply it to any type of animal.

On the other hand, campaigns that feature a lot of human-animal interaction may want to create even more categories for Animal Handler. At the extreme, a character might have to buy Animal Handler by individual species rather than by groups — the first species costs 2 Character Points for the PRE-Based Roll, each additional species costs +1 Character Point. In this sort of campaign, Animal Handler (Bullfrogs) wouldn't help a character work with cane toads or poison-arrow frogs — each of those amphibians would require its own Skill.

ANIMAL HANDLER BY GENRE

Animal Handler works the same in all genres. It's particularly common in some genres (such as Fantasy and Western), but functions the same regardless.

Cyberpunk/Near Future

In most Cyberpunk campaigns, Animal Handler is almost unheard of (except for Canines, for guard dogs). Many Cyberpunk characters go their entire lives without seeing animals other than rats, pigeons, and other urban vermin.

Fantasy

In *Fantasy Hero* campaigns, GMs may want to expand the categories this Skill applies to so it covers various types of "monsters." The Animal Handler Categories table already lists dragons, pegasi, and unicorns; other possibilities might include Aquatic Monsters (kraken, sea serpents, monstrous fish), Basilisks, Oozes, and Monstrous Hybrids (griffins, hippogriffs, manticores, and the like). If appropriate, an Animal Handler includes gigantic or monstrous versions of listed creatures; for example, giant wolves fall into the Canines category, and rocs into Raptors.

Lycanthropes and other zoomorphs (characters who can change into animal shapes) often have the ability to relate well with (or even speak to or summon) the type of animal(s) they can change shape into. One way to represent this is with a high Animal Handler roll in the appropriate category(ies). Animal Handler doesn't work on lycanthropes, since they're self-willed; if they're not sentient in their animal form, Animal Handler would work on them then, but at the standard penalty for "fierce" animals.

Science Fiction

In realistic Hard SF campaigns, alien animals are all completely different from any terrestrial species. Each planet has its own menu of animal categories, and knowing how to deal with creatures native to one world doesn't help on a new or strange planet (though the GM might allow an Animal Handler roll at -3).

In a more cinematic setting, such as a Pulp Sci-Fi or Space Opera campaign, alien animals may well look and act like Terran creatures. If it has wings and feathers, it's a bird, even if it comes from a planet orbiting Epsilon Eridani. Characters should still suffer a Skill Roll penalty of -2 for working with alien creatures in a group they know how to handle — at least until they've spent a game session or two learning about those animals' habits and instincts.

AUTOFIRE SKILLS

Type: Combat Skill (roll: N/A)
Cost: 5 Character Points for each Autofire Skill

These seven Combat Skills let characters use Autofire attacks more efficiently. They're most common in Dark Champions campaigns and other games where characters frequently use Autofire weapons like submachine guns, but characters can buy them for innate Autofire powers if desired.

BUYING AUTOFIRE SKILLS

Each Autofire Skill costs 5 Character Points. Characters must purchase each one separately for the full price; they don't receive a "savings" for buying more multiple Autofire Skills.

If the GM wants to encourage lots of gunfire and fast-paced gunplay in the campaign, one way to do that is to reduce the cost of the Autofire Skills. If they cost, say, 3 Character Points apiece instead of 5, more characters will buy and use them.

USING AUTOFIRE SKILLS

Using any Autofire Skill takes a Full Phase and halves a character's DCV (this penalty is not cumulative if a character uses two or more Autofire Skills at once, nor does the time required add together — a character can use any number of Autofire Skills together as a Full Phase Action at half DCV). An Autofire Skill applies to any and all Autofire attacks a character has or uses; he doesn't have to buy it separately for each Autofire attack. (If a character can only use an Autofire Skill with one of several Autofire attacks, the GM may allow a Limitation, but usually this is worth -0 to -½ at the most.) Since each Autofire Skill is a separate Skill, Advantages and Limitations (if any) should be applied to them individually, not as a group added together.

Characters can "stack" two or more Autofire Skills together to, for example, execute Accurate, Concentrated, Skipover Sprayfire. When "stacking" in this fashion, a character takes the total of all the OCV penalties for the Skills used; the "combined" Skill takes a Full Phase Action to use and halves the character's DCV, as described above. Except as noted under each Skill, standard Autofire rules apply.

Generally, a character may not use his Autofire Skills with a Base's or Vehicle's weapons, unless those weapons have the *Uses Character OCV Not Vehicle OCV* Power Modifier from *The Ultimate Vehicle,* page 181. However, the GM may allow a character to buy these Skills specifically for use with base/vehicular weapons, in which case they would apply only to Base/Vehicle weapons and not to personal Autofire weapons/attacks.

CONCENTRATED SPRAYFIRE EXAMPLE

Renegade (CV 7) wants to use his H&K MP5 submachine gun (5-shot Autofire) to shoot three thugs standing in adjacent hexes. Using normal Autofire, he could only hit each thug once. However, using Concentrated Sprayfire, he fires all 5 shots and hits Thug #1 twice, Thug #2 twice, and Thug #3 once. He suffers a -3 OCV penalty for firing Autofire into 3 hexes, plus another -1 OCV for Concentrated Sprayfire, giving him OCV 3. He'd better hit them, since using Concentrated Sprayfire reduces his DCV to 4.

RAPID AUTOFIRE EXAMPLE

Magnum (OCV 10) carries a fully-loaded Uzi submachine gun (5-shot Autofire). He attacks three ninja (DCV 5) armed with swords. Since he'd rather not be filleted, he uses Rapid Autofire to shoot each of them once with a three-round burst (thus expending a total of nine bullets). He suffers a -4 OCV to all shots he takes, so he needs a 12- to hit. He rolls an 8 against the first ninja, hitting him three times. Then he rolls a 13 against the second ninja and misses. Since he missed Ninja #2, he automatically misses Ninja #3.

SKIPOVER SPRAYFIRE EXAMPLE

Renegade (CV 7) attacks four more thugs who've spread themselves out so that there's an empty hex between them (thus, they occupy a total of seven hexes). Unfortunately for them, Renegade has Skipover Sprayfire, so he won't waste any bullets on the empty hexes. Since Renegade's gun has an Autofire rate of 5, he can track his attack across 5 hexes — so he can't attack all four thugs. He attacks the first three on his left. Using Skipover Sprayfire and Concentrated Sprayfire, he fires two shots at Thug #1, two at Thug #2, and one at Thug #3. He suffers a -5 OCV for tracking Autofire across five hexes, -1 OCV for Concentrated Sprayfire, and -1 OCV for Skipover Sprayfire, making his OCV 0. Good luck.

The Autofire Skills

ACCURATE SPRAYFIRE

The character can use Autofire against multiple targets with great accuracy. He suffers only a flat -1 OCV penalty (instead of the usual -1 OCV per hex fired into penalty). Accurate Sprayfire bonuses also apply when characters use Suppression Fire against multiple hex lines.

CONCENTRATED SPRAYFIRE

When using Autofire against multiple targets, the character can concentrate his attack to fire multiple shots at a particular target, instead of the standard one shot per target. He incurs a -1 OCV penalty (in addition to standard Autofire modifiers).

DEADLY SPRAYFIRE ⚠

When a character with this Autofire Skill uses an Autofire attack against a single target, he rolls damage differently to reflect his deadly accuracy and control. Instead of rolling a separate damage roll for each attack that hits, the character makes just one roll: he takes the base damage of the attack and increases it by +1 Damage Class for each additional attack that hit.

The GM should evaluate this Autofire Skill carefully before allowing it in the game. It reflects the "realistic" chance that multiple hits from an Autofire attack will inflict serious injury or death. But because of the way the *HERO System* damage-versus-defenses rules work, it also makes it more likely that a heavily-armored character can be hurt by a low-powered attack. The larger damage roll also makes it more likely the attack will Stun the target.

PRECISE SPRAYFIRE I

The character can use Autofire against a single target with great accuracy. For every full two shots fired at a single target, he receives a +1 OCV bonus. (Thus, 2-3 shots means +1 OCV; 4-5 shots +2 OCV; 6-7 shots +3 OCV; and so on.) However, since the number of Autofire hits depends on how well he makes his Attack Roll, a character using Precise Autofire I can only hit the target one time — he trades the possibility of multiple hits for a greater chance to hit once. The GM may cap the Precise Autofire I bonus at some level, if necessary.

PRECISE SPRAYFIRE II ⚠

The character can use Autofire against a single target with great accuracy. Instead of hitting with one shot for every 2 points he makes his Attack Roll by, he hits with one shot for every 1 point he makes the roll by. The GM may cap the number of hits at some level (such as half the overall number of shots fired), if necessary.

RAPID AUTOFIRE

A character with this Skill may use Autofire attacks with the Combat Maneuver *Rapid Fire* (see page 396 of *The HERO System 5th Edition, Revised*). He must fire the same number of shots in each burst of Rapid Autofire (*i.e.,* if he fires 3 shots at his first target, he must fire 3 shots at all targets, even if his Autofire could fire up to 5 shots). He suffers Rapid Fire's cumulative -2 OCV penalty for each burst of Autofire fired after the first, in addition to any standard Autofire penalties.

If the campaign features characters with Autofire HTH attacks, the GM can allow characters to buy an alternate version of this Skill, *Rapid HTH Autofire.* It works just like Rapid Autofire, but for the Combat Maneuver *Sweep* instead of Rapid Fire.

SKIPOVER SPRAYFIRE

When firing at multiple targets, a character with Skipover Sprayfire can fire Autofire attacks in small bursts at nonadjacent hexes, so he doesn't waste Charges or energy firing into empty hexes. He only has to fire into the hexes he wants to fire into (*i.e.,* those with targets in them), instead of into each hex counted in the hex line between targets. He incurs the standard -1 OCV penalty for each hex he tracks his attack across (even if he doesn't fire an attack into that hex), and can track his attack across a number of hexes no greater than the number of shots he can fire. Skipover Sprayfire attacks are at -1 OCV (in addition to Autofire penalties).

Other Rules

EQUIPMENT; POWERS

Although Autofire Skills are most often used with Autofire weapons, they don't actually require any equipment — they're a purely personal Skill. For example, a superhero with an Autofire Energy Blast power could buy some Autofire Skills to use with it.

CONSEQUENCES OF FAILURE

Since the Autofire Skills don't have rolls, they can't "fail" in the conventional sense (though a character could fail his Attack Roll while using one, of course).

BASE TIMES

Using any Autofire Skill, or combination of Autofire Skills, takes a Full Phase.

AUTOFIRE SKILLS BY GENRE

Autofire Skills work the same in all genres, but they're usually only found in genres and settings where Autofire weapons are common: Dark Champions, Cyber Hero, "Military Science Fiction" Star Hero campaigns, and the like. They're generally inapplicable (or at least inappropriate) in most Fantasy games (which usually lack Autofire weapons), but the GM might allow a character to buy them for use with an Autofire spell or enchanted weapon. For example, a magic bow might provide a character with the power to fire up to four arrows at once (Autofire) and with great accuracy (Accurate Sprayfire, Precise Sprayfire I).

BREAKFALL

Type: Agility Skill (roll: 9 + (DEX/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

This Agility Skill allows a character to roll out from a fall and stand up instantly, protect himself from the effects of falls, and perform related tasks. It has four primary uses:

■ it allows a character to stand up from a prone position without taking a Half Phase

■ it allows a character to reduce the damage caused by (and sometimes other effects of) a fall or from being thrown

■ it allows a character to land on his feet when Knocked Back, Knocked Down, or otherwise knocked off of his feet

■ it allows a character to maintain his balance and/or footing on narrow, slippery, or shaky surfaces (such as a slender ledge, ice, a bobbing rowboat, a tightrope, rain-slicked pavement, or the like)

STANDING UP FROM PRONE

Normally, a character must use a Half Phase Action to get on his feet from a prone position. A successful Breakfall roll allows a character to regain his feet as a Zero Phase Action. Usually this roll is unmodified, but if the character's Encumbered, or the surface he attempts to stand up from is especially slippery or uneven, the GM may impose a negative modifier as he sees fit.

Standing from a prone position applies to being prone for any reason. This includes lying on the ground after falling or being thrown, landing on the ground after taking Knockback, sleeping in a bed, resting on a floor, and so forth. However, a character cannot use Breakfall to instantly stand up after using a Combat or Martial Maneuver that automatically makes him fall or become prone (such as a Sacrifice Throw). But he can use Breakfall in a subsequent Phase to get to his feet without taking a Half Phase Action (or possibly even in a subsequent Segment, if the GM allows him to Abort to get to his feet to eliminate the DCV penalty for being prone).

REDUCING FALL AND THROW DAMAGE

A character who makes a Breakfall roll only takes half damage from a fall, or *no* damage if he makes his roll by half or more. However, there's a -1 penalty to the roll for every 2" fallen, so characters shouldn't expect to use Breakfall to walk away from major falls. (At the GM's option, making an Extraordinary Skill Roll with Breakfall would allow a character to survive a fall from virtually any height... maybe only barely, but survive nonetheless.) See page 434 of *The HERO System 5th Edition, Revised* for rules about falling damage.

Similarly, a character can use Breakfall to reduce the damage he takes from any attack that throws him to the ground (such as a Martial Throw or Takedown maneuver). With a successful Breakfall roll, the character only takes half damage from the attack; if he makes his roll by half or more, he takes no damage. He suffers a -1 penalty to his roll for every 2d6 damage in the attack. For instance, if a Martial Throw does 6d6 damage, the character suffers a -3 penalty to his Breakfall roll to halve or avoid that damage. If he makes it, he only takes 3d6 damage (or no damage if he makes the roll by half or more). If he fails, he takes all 6d6. In addition to the damage modifier, the hardness and evenness of the surface the character's thrown onto modify the roll (see the Breakfall Modifiers table).

Breakfall's ability to reduce Throw damage works even if the attack that throws the character is defined as, for example, a punch strong enough to knock the character down. Some of the damage comes from the punch, but some comes from being knocked or thrown to the ground. A successful use of Breakfall eliminates the half of the damage that comes from hitting the ground; however, it cannot eliminate the damage from the punch. In these situations, the GM should determine what part of the damage, if any, a character can avoid with Breakfall.

A single Breakfall roll lets a character either halve the damage from a Throw *or* retain his footing (see below); he can't do both with one roll. However, the GM may allow a character to make two rolls to do both.

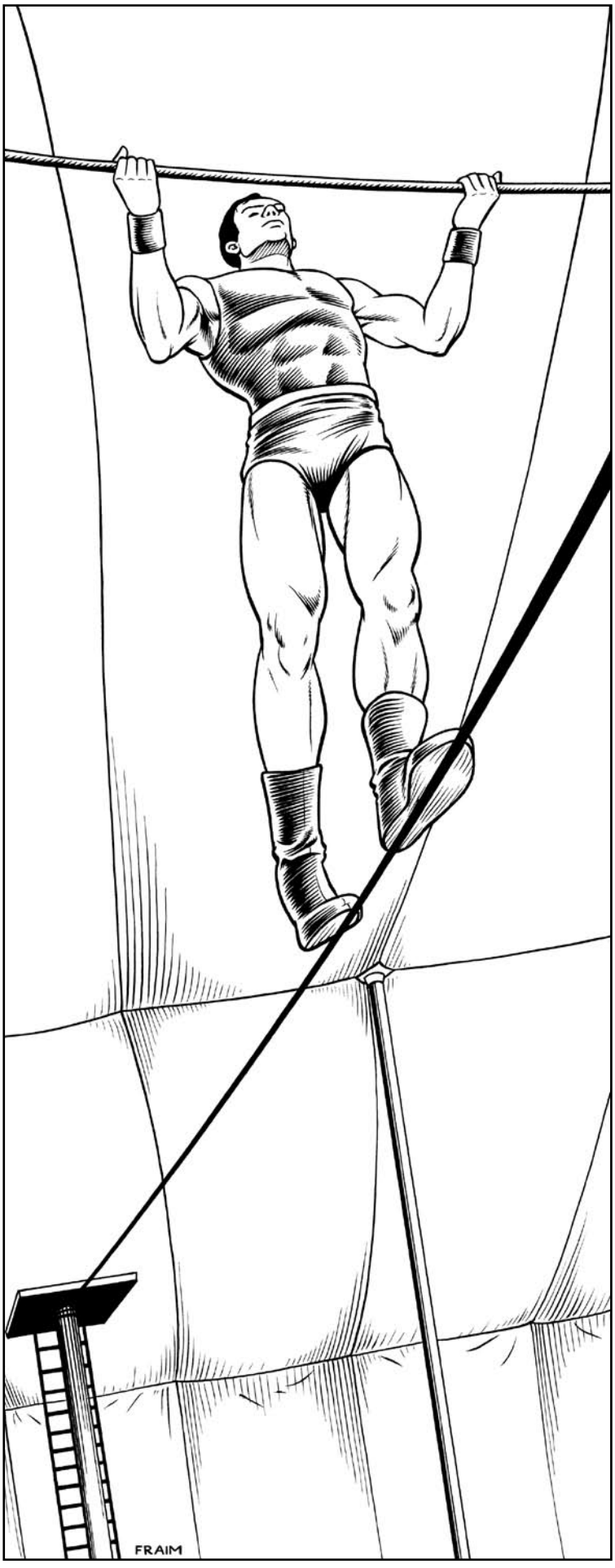
Going First In The Next Common Phase

Throws (including both Grab and Throw and any Martial Maneuver with the "Throw" element) have the effect that the attacker (the person who made the Throw) automatically gets to act first (regardless of relative DEX) if he and the victim have their next Phases in the same Segment. At the GM's option, if the thrown character makes a Breakfall roll by half, he avoids this effect, and the characters act on their DEXs like normal. This Breakfall roll is in addition to any others made to avoid Throw damage or stand up from being prone. Thus, to avoid throwing damage, avoid the "initiative penalty," and get to his feet instantly, a character has to succeed with *three* Breakfall rolls (and must succeed with the one to eliminate the initiative penalty by half).

BREAKFALL MODIFIERS

Surface Hardness	Modifier	Example
Extremely Soft	+1 to +3	Pillows
Soft	-0 to +1	Water, a cushion or mat, extremely soft earth
Average	-1	Carpeted floor, average earth or sand
Hard	-2	Wooden or tile floor, packed earth
Extremely Hard	-3	Cement or asphalt, metal
Evenness		
Smooth or even surface	-0	Floor, most sidewalks
Sloped surface	-0 to -1	Hillside, ramp
Bumpy, uneven surface	-1	Stairs
Cluttered surface	-1	Trash-strewn alley, rocky ground

These penalties are cumulative; an extremely hard, uneven surface (say, a sidewalk with a lot of broken bricks and trash lying around) will impose a -4 to the target's Breakfall roll.



Acrobatics And Throw Damage

Characters can also use Acrobatics to avoid some effects of throws (see page 71). A character cannot perform both a Breakfall roll and an Acrobatics roll in the same Phase to resist being thrown and to reduce the damage from being thrown: he can only use one of them against a given Throw attack. However, the character could make one Acrobatics or Breakfall roll to avoid some of the effects of the Throw, and then make a separate Breakfall roll to regain his feet instantly (without taking a Half Phase). He could make an additional Breakfall roll by half in the same Phase to negate the "initiative penalty" (see above).

Riding Animals And Vehicles

A character riding on an animal or in a vehicle may use Breakfall to avoid damage if he's thrown off or out of his conveyance.

Diving

Related to the concept of avoiding falling damage is diving. A character who wants to dive into the water safely from a great height may make a Breakfall roll to do so (and an Acrobatics roll, if he wants to look graceful while diving). Standard height modifiers apply. If the character dives into shallow water, rocky water, or the like, the GM can impose a "hardness" or "evenness" penalty from the Breakfall Modifiers Table to simulate the difficulty this imposes on the dive.

AVOIDING THE EFFECTS OF KNOCKBACK

Whenever a character suffers Knock Down, Knockback, or any similar effect that knocks him off of his feet, he can make a Breakfall roll to land on his feet, provided the effect only knocks him into the ground, not into a wall or object (see below). This is an Action that takes no time. If the roll succeeds, the character takes no damage from the Knock Down or Knockback (and doesn't have to spend any time getting back on his feet). The roll suffers a -1 penalty for every 2" of Knockback taken, in addition to any general modifiers that apply (thus, a character who suffers only Knockdown or 1" of Knockback suffers no penalty to his Breakfall roll to keep his feet). The character still "takes" the Knockback — he still gets moved back that number of inches — but he keeps his footing and avoids taking any damage from hitting the ground. Since the character's attempting to retain his footing (in other words, to avoid being knocked off his feet), not to avoid damage from landing on a surface, modifiers for the hardness of the surface do not apply to this type of Breakfall roll.

If a character fails his Breakfall roll to keep his footing and avoid Knockback damage, he takes the inches of Knockback, suffers any damage, and ends up prone. On his next Phase he can make a Breakfall roll to stand up as a Zero Phase Action. (The GM may even let him do this on a later Segment by Aborting to get to his feet and thus negate the DCV penalty for being prone.) Failing the damage-avoidance roll doesn't preclude a later roll to stand up from being prone.

Knockback Into Objects

Breakfall does not apply to avoid any of the effects of Knockback if the character is knocked into a wall, tree, vehicle, or other object. Nor is it going to reduce the effect the character suffers if Knockback knocks him off a cliff, into a lava pit, or the like. It only applies if the character is knocked to the ground. If a character is Knocked Back into an object, he becomes prone and cannot immediately make a Breakfall roll to land on/get to his feet. However, he may make a Breakfall roll to instantly get to his feet on his next Phase (or sometimes the next Segment, by Aborting), per the usual rules. Whether the object breaks or not has no effect on this rule.

MAINTAINING FOOTING

When a character stands on a slippery, slick, shaky, or difficult ground, Breakfall is the Skill he uses to try to keep his footing (if appropriate, the GM may allow characters without Breakfall to do this using just a DEX Roll, but with a -1 or greater penalty in addition to any applicable negative modifiers). Examples include ice or icy ground, wet floors, swampy or muddy ground, or standing in the middle of a stream or river. When a character attempts to move on such ground in a stressful situation (*i.e.,* in combat), he must make a Breakfall roll to retain his footing. The modifiers listed in the accompanying Footing Table apply.

Additionally, per page 379 of *The HERO System 5th Edition, Revised,* a character is at -1 DCV and -1 DC from all attacks made while on slippery ground unless he succeeds with a Breakfall roll. Similarly, he suffers a -2 DCV and -2 DCs while on narrow surfaces such as branches, tightropes, and building ledges unless he succeeds with a Breakfall roll. In both cases this is a normal roll, unmodified by the penalties in the Footing Table.

Balancing

Similarly, a character can use Breakfall to retain his balance when walking on narrow or difficult surfaces, such as tiny mountain ledges, tree branches, the edges of buildings, or tightropes (if appropriate, the GM may allow characters without Breakfall to do this using just a DEX Roll, but with a -3 or greater penalty in addition to any applicable negative modifiers). The GM should assign modifiers according to the nature of the surface and the difficulty of the situation (see the Balancing Table and Footing Table for some suggestions). In easy situations — such as walking on top of a balance beam for practice, or creeping along a wide ledge under excellent conditions — there's probably no need to even make the character roll. But in a crisis or under stressful or poor conditions, the GM should require a character to make a Breakfall roll to retain his balance.

At the GM's option, if two characters use Breakfall to walk on the same narrow, flexible surface (such as a tightrope), as a Full Phase Action they can engage in a Skill Versus Skill Contest to try to make the task more difficult for the other person. After you determine who wins the contest, the character who lost must make another Breakfall roll to keep his footing on the surface. In addition to other standard modifiers for the surface, he suffers a penalty of -1 per point by which the other character won the Contest. If the roll fails, he falls off the surface (though the GM may allow him a DEX Roll to grab hold of it as he falls, or the like).

FOOTING TABLE

Slipperiness	Modifier	Example
Dry	-0	
Slippery	-1	Wet pavement or floor
Very Slippery	-2	Muddy ground; midstream; waxed/soapy floor
Extremely Slippery	-4	Ice; icy pavement or floor
Steadiness	**Modifier**	**Example**
Steady	-0	Ordinary floor
Unsteady	-1	Rocking boat, trampoline
Very Unsteady	-2	Boat in a storm

These modifiers are cumulative; an unsteady, slippery floor is worse than a steady, slippery one.

BALANCING TABLE

Narrowness Of Surface	Modifier	Example
Very broad	+3	3.1 or more times the width of a human foot, such as an easy mountain pathway
Broad	+1	1.6 to 3 times the width of a human foot, such as a broad building ledge or thick tree branch
Narrow	-2	Up to 1.5 times the width of a human foot, such as a balance beam or a narrow building ledge
Very narrow	-4	Tightrope
Other Conditions	**Modifier**	
Using balance pole		
Short	+0 to +1	
Medium	+2	
Long	+3	
Winds		
Strong winds	-2	
Very strong winds	-4	
Character is barefoot	+1	
Slack tightrope	-2	

Modifiers from the Footing Table also apply to attempts to maintain balance.

OTHER USES FOR BREAKFALL

At the GM's option, a character can make a Breakfall roll as a Complementary Skill Roll to Stealth to represent the fact that he can walk easily on his tip-toes and keep his balance while not stepping on objects that might make noise. The character must make the roll each Phase he uses Stealth; a bad failure (by 4 or more) may completely ruin the character's chance to remain stealthy, even if his Stealth roll succeeds. (Alternately, the character may have to make his Stealth roll by more than he failed his Breakfall roll to keep quiet.)

If the GM uses the optional new *Feint* Skill (page 360), he may allow a character to use Breakfall as a Complementary Skill to the roll he makes to avoid the effects of an attacker's feint. Part of feinting involves balance and positioning of the feet, and a character with Breakfall knows how to judge these factors and determine how they'll affect his attacker's action.

ANIMALS AND BREAKFALL

Few creatures have Breakfall; for most, a fall (or its consequences) can be fatal. Only animals that do a lot of climbing — such as primates, cats, or squirrels — tend to know this Skill. Some flying creatures, including mythical or fantastic ones, may know it as well.

EQUIPMENT

Breakfall doesn't involve or require any equipment; it's a purely personal Skill.

POWERS AND BREAKFALL

Characters with some forms of Flight can sometimes use their power to mimic certain aspects of Breakfall. For example, they could "fly" while walking along a narrow ledge (and thus appear to have perfect balance), or perhaps appear to "fall" but then land gently at the last second. Gliding often makes it unnecessary to use Breakfall to avoid the effects of long falls; the character can simply glide to the ground. Characters with Clinging can "stick" to narrow ledges, slippery floors, and similar surfaces with no risk of falling under ordinary circumstances.

CONSEQUENCES OF FAILURE

Typically, failing a Breakfall roll simply means the character didn't accomplish what he wanted to — he didn't stand up from prone quickly (and now has to take a Half Phase to do so if he wants to get up), failed to keep his footing, took damage from a fall or throw, suffered DCV and DC penalties, or the like. At the GM's option, badly failing a Breakfall roll (by 4 or more) to avoid damage from a fall, throw, or Knockback/Knockdown may cause the character to take an additional 1-2 DCs of damage from the attack because he landed so poorly. The GM could also use the Failed Acrobatics Rolls table on page 72 to determine what happens to the character.

BASE TIMES

Typically making a Breakfall roll is an Action that takes no time, but typically a character can only make one Breakfall roll to do a specific thing per Phase. For example, even though it takes no time to make a Breakfall roll to get to one's feet as a Zero Phase Action, a character can only try to do that once per Phase.

SUBDIVIDING BREAKFALL

If you think that Breakfall provides too many benefits to be a single Agility Skill, you can split it up into three Agility Skills: Prevent Fall (which reduces the damage caused by long falls); Combat Breakfall (which characters use to resist the effects of being thrown or taking Knockback, and to stand up instantly from a prone position); and Balancing (which characters use to balance on narrow or slippery surfaces).

BREAKFALL BY GENRE

Breakfall works the same in all genres, though it's more common in some (such as Martial Arts and Superheroes) than in others.

Science Fiction

Breakfall gets easier in low gravity and harder in high gravity. (These rules replace the more general ones in Chapter Four.) Apply a Skill Roll penalty of -1 for every 20% increase above 1.0 G. For example, on a planet with a surface gravity of 1.6 G, the Breakfall penalty is -3. On the other hand, low gravity gives a +1 Skill Roll bonus at anything between 0.3 and 0.6 G, and +2 for gravity below 0.3 G.

It may seem odd, but Breakfall is a useful Skill to have in zero gravity! Characters can use Breakfall to cushion the impact when they bounce off a wall in free fall. They receive a +2 bonus to the roll for this purpose.

Superheroes

Breakfall is most often associated with martial artists and other agile characters. But it's not necessarily out of line for a super-strong or super-touch character (a "brick") even if he has a very low DEX. Since characters can use Breakfall to diminish the damage from falls and Knockback, bricks could take the Skill for that purpose alone — it represents their ability to withstand injury, not the fact that they're fast on their feet. If appropriate, a brick could even take a -½ Limitation, *Only To Reduce/Avoid Damage From Falls And Knockback,* to reflect how Breakfall works for him. This means he can't use the Skill to stay on his feet or get to his feet as a Zero Phase Action; he can only use the damage-resisting aspects of the Skill. For example, if he took Knockback and succeeded with his Breakfall roll, he'd still fall to the ground, but he wouldn't take any Knockback damage.

For shapechanging characters, you can simulate some aspects of the ability to rapidly change form with Breakfall. For example, while a cat-like character always lands on his feet, a metamorph might simply create feet and legs pointing toward the ground and then reform his body to match. For particularly elastic characters, Breakfall could represent the ability to "soften" the area nearest the ground so it cushions the force of impact. A metamorph might be able to easily balance on the narrowest or slipperiest surfaces by contorting limbs for more stability, increasing foot size, or growing spikes to stick in slippery surfaces.

BRIBERY

Type: Interaction Skill (roll: 9 + (PRE/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

A character with this Interaction Skill knows about the ancient art of greasing palms to get things — often illegal things — done. Specifically, he knows:

- what to bribe someone with
- how to approach a bribee
- how much to offer

Complementary Skills for Bribery can include Conversation, Persuasion, Seduction, and Area or Culture Knowledges. The right language also helps immensely (see the Bribery Modifiers table).

Characters should roleplay bribery attempts as much as possible, with the GM allowing a character to make Bribery rolls at crucial points in the bargaining to determine how much to offer, how subtle to be, and so on.

WHAT TO BRIBE SOMEONE WITH

The first issue a character has to consider when using Bribery is what to offer the prospective bribee. Call it baksheesh, a tax, tea money, *mordida,* a "special assessment," a fine, or what have you, the best thing to offer in most situations is money. It makes the world go 'round, after all, and in the right amounts given to the right person it can certainly ease a character's way through Customs while carrying contraband goods or get him off the hook for a crime.

But in some situations, non-cash bribes — food, liquor, cigarettes, use of a vehicle, the performance of a special service, or the like — work better. The prospective bribee may have a direct need for something other than money, or perhaps he's in a setting where cash isn't as useful as it normally is (such as prison).

If appropriate, a character can make a Bribery roll to judge what a potential bribee will accept as a bribe; this usually requires at least 1 Minute of observing the subject. If the roll succeeds, it functions as a Complementary Skill roll for the later attempt to make the bribe. If it fails, the character gains no useful information; if it fails badly (by 4 or more) he suffers a -2 penalty on the later attempt to make the bribe.

The GM must determine what the prospective bribee will accept as a bribe. As noted on the Bribery Modifiers table, the closer the character's offer comes to what the bribee wants, the more likely it is that the Bribery roll succeeds. As a default, the standard local currency constitutes "what the bribee will accept."

APPROACHING THE BRIBEE

A character planning to use Bribery also has to consider his approach to the potential bribee.

In most cases, bribery is illegal, or at best part of the underground economy, so the character has to approach the bribee subtly. He can't simply walk up to him and offer to pay him in exchange



for some favor; that will only get him (and perhaps the target of the bribe attempt) arrested. Instead, once he comes into contact with the bribee, he has to covertly indicate his willingness to offer a bribe. The classic examples in the movies involve hiding money in documents or containers the bribee must inspect, slipping the bribee money under a counter or table, or giving the bribee folded paper money while shaking hands with him. If appropriate, the GM may have the character make a Bribery roll based on DEX rather than PRE to simulate the proper hiding and transfer of the bribe.

In cultures where bribery is accepted or expected, the character's task may be much simpler. In that case, all he has to do is follow the accepted protocol — which may involve spending a few moment conversing with the bribee, or engaging in some other social ritual — while negotiating the specifics and making the payoff. Appropriate Knowledge Skills, such as Cultural Knowledges, may help the character significantly in these situations, but having the *Bribery* Skill alone indicates the character has the ability and judgment to deal with most such situations successfully.

One easy way to determine a subject's susceptibility to bribery is if he opens the negotiations himself. If a character is arrested by a law enforcement officer who offers to "find a way to work things out" (or to let the character pay his fine on the spot!), or a bureaucrat who mentions "special application fees that smooth the approval process," the problem of making the approach is solved.

BRIBERY MODIFIERS

GENERAL MODIFIERS

Modifier	Circumstance
Illegality	
-0 to -1	Character asks bribee to overlook/cover up a mildly illegal act (a speeding ticket, disturbing the peace)
-2	Character asks bribee to overlook/cover up an illegal act (smuggling of non-dangerous goods, assault and battery)
-4	Character asks bribee to overlook/cover up a seriously illegal act (smuggling dangerous goods, murder or manslaughter, assault with intent to kill, rape)
Language	
-1	Character and bribee speak similar, but not identical, languages
-3	Character and bribee speak dissimilar languages and/or have similar difficulty communicating
Target's Susceptibility To Bribery	
	Bribee has Psychological Limitation in favor of being bribed (*e.g.,* Greedy, Amoral, Looks Out For Number One)
+1	Moderate
+2	Strong
+3	Total
	Bribee has Psychological Limitation opposed to being bribed (*e.g.,* Incorruptible, Scrupulously Honest, Devoted To His Duty)
-1	Moderate
-2	Strong
-3	Total

TYPE OF BRIBE

Modifier	Bribe Character Offers Is...
+0	Identical to what bribee wants: US dollars when he wants US dollars
-1	Similar to what bribee wants: US dollars when he wants British pounds
-2	Dissimilar to what bribee wants: raw diamonds when he wants currency
-4	Not at all similar to what bribee wants: food when he wants currency

AMOUNT OF BRIBE

Modifier	Amount Of Bribe Is...
+2	Exactly what the bribee will accept
	More than what bribee will accept
+3	1-19% more
+4	20-39% more
-2	40-59% more
-4	60%+ more
	Less than what the bribee will accept
-2	1-19% less
-4	20-39% less
-6	40-59% less
-8	60%+ less

HOW MUCH TO OFFER

Perhaps the most difficult thing for a character using Bribery to evaluate is how much to offer. Too little, and he risks being rejected (or, worse, arrested for attempting to bribe someone); too much, and he may excite suspicion or mark himself as a sucker.

Before a character offers a bribe, he can make a Bribery roll to determine what he thinks is a good offer. The GM should modify this roll based on the character's familiarity with the situation, the culture, and the people involved (but remember, any character who has Bribery has at least some ability to evaluate bribery attempts, so even total ignorance of the situation shouldn't impose too hefty a penalty). If appropriate, the character should make the roll where only the GM can see it, or the GM should make it for him; that way the player won't know if he failed.

If the roll succeeds exactly, the character knows generally how much to offer, plus or minus about ten percent (10%). For every point by which the character makes the roll, the GM should reduce the margin of error by three to five percent; if the character succeeds by three or more, he knows exactly how much he should offer. If the roll fails, the character typically offers too much (10-20% more per point of failure), which either (a) causes problems, (b) costs him money he didn't need to spend, or (c) both.

The GM, playing the part of the NPC who's the target of the bribery attempt, also has to decide the minimum amount he'll accept (if any). He then compares the character's offer to that amount. The Bribery Modifiers table lists suggested modifiers based on the difference between the bribee's minimal accepted amount and what the character offers. Note that offering more helps... but only to a point. Too much money may make the bribee leery or suspicious. But as always, the GM should adjust these modifiers to account for specific cir-

cumstances. For example, if the bribee has the Psychological Limitation *Greedy,* or is positive he can get away with accepting more money, the negative modifiers may not apply.

MAKING THE BRIBERY ROLL

After the GM determines and applies all the relevant modifiers (including ones based on prior Bribery rolls, as described above), the character makes his final roll to bribe the target successfully. Even in situations where the character suffers significant negative modifiers, he may still succeed, meaning what he offered, how he offered it, or who he offered it to somehow convinced the bribee to take the bribe despite the poor circumstances. On the other hand, even in the best situation the character may flub the offer or run into someone who's incorruptible (see *Consequences Of Failure,* below).

EQUIPMENT

Bribery doesn't involve or require any equipment; it's a purely personal Skill. However, unless the bribe involves an exchange of services, the character needs something to bribe the subject with — money, trade goods, or the like.

POWERS AND BRIBERY

Various Mental Powers may help a bribery attempt, or render it unnecessary. For example, Telepathy can discover the subject's susceptibility to bribery and how much he'd want (but the character has to achieve the +20 "victim does not know his mind is being read" level of effect or else he'll tip off the subject). Even better is Mind Control; a sufficiently high Effect Roll with Mind Control removes the need for a bribe. If the character is concerned he can't achieve a high enough roll, he can instead try for a subtler effect, such as EGO +10 to make the subject "do something he wouldn't mind doing" — that would be enough to convince a corruptible, but nervous, official to go ahead and take a bribe.

EFFECTS OF SUCCESS

Succeeding with a Bribery roll usually means a character has accomplished three things. First, he's gotten the target to accept the bribe. Second, the target of the bribe will do what the character wants. Third, the bribee won't betray the character, alert the authorities to his activities, or the like.

CONSEQUENCES OF FAILURE

Typically, a failed Bribery attempt results in a refusal to take the bribe, perhaps accompanied by a pointed question ("Are you trying to bribe me, sir?"). If the Bribery attempt fails badly (by 4 or more) or if the character attempts to bribe an incorruptible target, the potential bribee may call his superior or the police, arrest the character, or threaten him with a weapon. Also, just because a character has bribed someone doesn't mean that person will *stay* bribed....

BASE TIMES

Typically an attempt to use Bribery requires at least a Full Phase Action — the time needed to make the offer and have it accepted. But depending on the circumstances, the character may have to spend a lot more time than that engaging in social give-and-take as a way of "negotiating" the bribe, sizing up the prospective bribee in advance, or filling out the paperwork to hide whatever it is the bribee is helping him conceal.

SUBDIVIDING BRIBERY

In campaigns involving a lot of social interaction, the GM may want to require characters to buy Bribery by culture or region. Thus, a character skilled at passing bribes in China might not know anything about it in America (though the GM might let him make a roll to bribe Americans at a penalty of -3 or more). Typically the first culture or region costs 2 Character Points for a PRE-Based roll; each +1 culture/region costs +1 Character Point.

BRIBERY BY GENRE

Generally speaking, Bribery works the same in all genres — the only things that tend to differ are what the character offers as a bribe, and how much.

Science Fiction

In post-economic settings, where there's no money or money exists solely as electronic "currency," Bribery may become more difficult. After all, when every transaction can easily be traced, hiding illicit payments (if, in fact, they're considered illicit) becomes difficult or impossible. In that case, bribes may have to consist of goods or services instead of money.

BUGGING

Type: Intellect Skill (roll: 9 + (INT/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

Characters with this Intellect Skill know how to work with and use listening, visual, and other covert sensing devices ("bugs"), wiretaps, and related equipment properly. Among other things, they can:

■ plant bugs for best reception and transmission

■ operate bugs for maximum effect and efficiency, using them to watch or listen to someone (or some place) from a distance

■ operate listening or tracking devices designed to be worn by a person and/or placed in or on a moving object (such as a car)

■ "sweep" (search physically or with detectors) for bugs that other persons have planted

■ disable or counteract bugs planted and used by other persons

■ create bugs (assuming they have the proper equipment and supplies to do so)

A character with Bugging knows about the different types of bugs (and related equipment) available, how they work (and under what conditions they won't work, or work less effectively), and which ones tend to be most effective for which types of tasks. He knows the common (and uncommon) hiding places for bugs, and which work best given the different types of bugs, environmental conditions, and so forth. He knows about various types of bug detecting equipment — how to operate them, their strengths and limitations, and so forth.

Additionally, a character with Bugging knows how telephones, telephone lines, and telephone systems operate. Many Bugging tasks involve placing "wiretaps" or similar devices into telephones, and these devices often won't function well (or at all) if not properly installed. A character with Bugging knows how to determine which phone lines feed into which buildings or rooms (sometimes from blocks away), how telephone system equipment works, and the like. (This does not include knowledge of, or the ability to work with, cellular phones or telephone networks as a whole; that's a function of Systems Operation.)

Although Bugging often involves the use or monitoring of electronic equipment, it isn't the same thing as Systems Operation. Bugging focuses on a very narrow and specific type of electronic covert sensing equipment, whereas Systems Operation covers a wide range of electronic communications and sensing equipment.

PLANTING BUGS

The most common task performed with Bugging is to "plant" a bug or like device in a location so the character can observe that location surreptitiously. As noted below under "Equipment," where you can find game information about a wide variety of bugging gear, characters with Bugging are assumed to start out with a small supply of bugs and related equipment.

Planting Standard Bugs

To plant a standard bug, a character needs access to the location where the bug is to be located, of course. This may require some breaking and entering work on the character's part, or the use of wits, forged documents, or other forms of subterfuge. This can be an adventure in and of itself!

Once in the proper location, the character makes a Bugging roll to determine the best place to put the bug; the GM applies a modifier from the Bugging Modifiers table to represent the ease or difficulty of the task. The modifier reflects the general conditions of the location. Some areas are good for Bugging because they have lots of places to conceal bugs, good acoustics, and the like, while others are difficult to bug because they have the opposite qualities.

This Bugging roll takes into account finding the best places to get sound and/or video reception for a bug, determining the optimum places for a bug to transmit what it "sees," and placing a bug so that it's not readily apparent to persons in the room (but not hiding it; see below). If the roll succeeds, the character has chosen the optimum location for the bug, given the prevailing circumstances; the bug functions effectively and provides clear sound and/or pictures (or as clear as possible given the situation).

If the roll to place a bug fails, the character placed the bug poorly. This may have one or more negative implications, such as:

■ poor pickup: the bug isn't positioned to get the best "view" of the location (or whatever it is the character wants to see or hear). The user of the bugging equipment must make PER Rolls each Phase (or some other time interval) to determine what's being seen or heard. If the roll fails badly (by 4 or more), it may mean the bug cannot pick anything up (either it's malfunctioned, or it's horribly placed).

■ poor transmission: the bug isn't positioned well for transmitting; something interferes with its ability to send information. The results are the same as for poor pickup.

■ easily found: anyone searching for the bug receives a +2 (or greater) bonus to locate it.

Properly placing a bug doesn't necessarily mean *hiding* the bug. Bugging by itself doesn't allow characters to hide bugs; that requires Concealment, with Bugging serving as a Complementary Skill. (Of course, the GM can instead describe the location and let the characters state where they hide the bug, thus dispensing with rolls in favor of roleplaying.) A bug placed with a successful Bugging roll but not Concealment isn't readily apparent — the average person in the location won't ever notice it — but it can quickly be found with a search, and it's possible for someone to stumble across it accidentally.

Characters often want to plant bugs so they can run off the electricity at the location, rather



than their own batteries. That way the bug can keep operating indefinitely. If this is possible, doing it entails a -1 penalty on the Bugging roll.

Characters can sometimes plant bugs that use some normal, non-grounded, metallic feature of the environment — a curtain rod, aluminum siding, springs inside a piece of furniture, the wire hanger for a picture frame, a metal filing cabinet, or the like — as an antenna for the bug. Trying to do this imposes a -3 penalty on the Bugging roll. If the roll succeeds, PER Rolls to make out what the bug transmits are at +1, and efforts to find the bug are at -1. If the roll fails, the bug still works, but there may be PER Roll penalties to understand what it transmits.

Another way to hide a bug is called "snuggling." This involves placing and setting the bug so that it broadcasts near some other, normal, signal in the spectrum (for example, the sound portion of a television broadcast), making it hard to perceive. If this is possible in a given location, the character has to make a Bugging roll at -3. If he succeeds, there's a -3 (or greater) penalty when others try to find the bug with Bug Detectors or similar equipment. If he fails, there's no penalty for trying to find the bug electronically (and if he fails by 4 or more, there may even be a small bonus to find them).

Planting Wiretaps

Characters with Bugging also know how to plant wiretaps. A skilled Bugging expert can sometimes tap into a phone line without going to the precise location where the phone to be tapped is located. Instead, he can find the right line outside the building, nearby, or sometimes even blocks away at a junction point or bridging box (a "downline tap"). The Bugging Modifiers table lists the penalties for trying to wiretap from a long distance away, but the GM may in some cases rule that it's impossible without inside information from the telephone company about which wires are the ones the character needs to tap.

Tapping a fiber-optic phone cable instead of a metallic one may be even harder, and/or require more sophisticated (and more expensive!) equipment. The GM may assign modifiers of -2 to -5 to reflect this. Even if the character can tap a fiber optic line properly, separating out the one conversation he wants to overhear from the many carried on that one line may be virtually impossible.

Planting Mobile Bugs

Of course, not all bugs are used in static locations. Characters use some to track vehicles, persons in transit, nomadic animals, and other moving things. In this case, the character needs access to the moving object rather than a specific location. Depending on how closely guarded or watched the object is, this may not be any easier than having to infiltrate a location.

Transmitters On People

A character with Bugging also knows how to "install" and use concealed microphones designed for undercover police operatives and the like. He knows what factors to take into account (ease of reception and transmission, possibility of discovery, possibility of damage to the unit, and so on) when selecting the right concealed microphone for the job, how best to attach it to the undercover operative's body, and so forth.

OPERATING BUGS

In most situations, operating a bug — listening to and/or watching what it broadcasts, in other words — requires no Skill Rolls or the like, just a lot of time and attention. However, as noted above, if a bug isn't well placed, the reception from it may be of poor quality, requiring PER Rolls to comprehend. In some circumstances, the character may be able to improve the reception slightly from a distance; this requires a Bugging roll at -3 (Systems Operation serves as a Complementary Skill).

SWEEPING FOR BUGS

Another common Bugging task is to "sweep" a room — to search for bugs other people have planted. Usually a character does this so he can remove, disable, or destroy the bugs, but sometimes he just wants to know where they are so he can feed false (or tailored) information to whoever's operating them. There are two ways to find a bug: without equipment, and with.

Without Equipment

The simplest way to sweep for bugs is with the eyes and hands — feeling under tables, looking in potted plants, and otherwise trying to find where a suspected bug is hidden. This requires a Concealment roll, with Bugging as a Complementary Skill. (If the character doesn't have Concealment, he can make a Bugging roll at -2 to find the bug.) The Bugging Modifiers table lists the modifiers based on the frequency and quality of potential hiding places. The GM may also impose a modifier based on the size of the bug (but since the *HERO System* doesn't have rules for the size of devices, beware of characters who constantly claim their bugs are "extremely tiny" to minimize the chance of detection). See Concealment later in this chapter for more information.

The above paragraph assumes the use of non-disguised bugs. If disguised bugs, or bugs hidden inside objects where they're not readily accessible (for example, inside a radio, the stuffing of a chair arm, or a smoke detector), then the character suffers an additional -2 to -5 penalty to find the bug — the GM determines the exact penalty based on how well-hidden he thinks the bug is, and what actions the character takes. In this case the GM may wish to have the character make a Bugging roll with Concealment as a Complementary Skill to reflect his specialized knowledge of how to use and hide bugs.

With Equipment

An easier way to locate bugs is with equipment specifically designed to find them by tracking the radio waves they emit. See the *Equipment* section, below, for game information about bug detectors.

In a pinch, a character may be able to use a radio to detect a bug by hearing the distortion in its sound when it gets too close to a bug. If the GM rules this is possible, it requires a Bugging roll at -4.

Success And Failure

Success on a roll to sweep for bugs means the character has found a bug (if there's one to find) or knows there are no bugs present (if not). The character must decide what to do with any found bugs — destroy them, disable them, generate nuisance sounds to make them useless, feed false information to whoever's listening, or the like. (If the bug is a visual one, the person using it may be aware that it's been found, since he can see the character searching for it.)

Failure on a sweeping roll means the character didn't locate any bugs that are in the area he swept. He thinks the area is bug-free (or at least can't verify his suspicions that it's bugged). If he fails the roll badly (by 4 or more), he may be absolutely convinced there are no bugs even when some exist.

DISABLING AND COUNTERACTING BUGS

The simplest thing for a character to do when he finds a bug is to rip it out and/or destroy it. Of course, this alerts the person who planted it that his bug has been discovered (or at least that something's gone wrong). But other options exist.

First, the character can attempt to disable the bug in such a way that the person who planted it thinks it's malfunctioned — it stops working, only broadcasts static, or the like. This requires a Bugging roll at -2 (or Electronics roll at -4). The person who planted the bug can, when he examines the bug, make a Bugging roll in a Skill Versus Skill Contest against the character's result to determine that his bug's been tampered with.

Second, the character can generate noise to make the bug useless, and/or conduct his activities so the bug can't perceive him. Basic methods for doing this include things like turning up a radio, or turning on showers and water faucets, and then speaking in whispers. This requires an unmodified Bugging roll. If the roll succeeds, the person listening to or watching the bug's broadcasts cannot perceive anything useful (or must make PER Rolls to do so at a penalty equal to the amount by which the character made his Bugging roll). If it fails, he can listen or watch as normal.

Characters may have equipment that counteracts bugs with ease. For example, the white noise generator (see below) broadcasts low-level sound that won't disrupt the character's conversations or activities but makes it virtually impossible for a person listening to a bug in the room to hear anything.

CREATING BUGS

Given a lot of time, expensive components, and even more expensive tools, characters with Bugging can create bugs like the ones described under *Equipment,* below. This requires an unmodified Bugging roll and a Base Time of 3 Hours (often longer). In a pinch, they can also jury-rig a primitive audio bug out of equipment such as wireless microphones, some types of radios, hearing aids, cellular phones, cordless phones, and the like. This requires a Bugging roll at -2 (or worse) and a minimum of 1 Hour — and unless the character succeeds with his roll by 3 or more, the reception on the bug is poor (listeners must make PER Rolls at -2 [or worse] every Phase to understand what's heard). In either case, Electronics usually serves as a Complementary Skill.

BUGGING MODIFIERS

Planting Bugs	Modifier
General Modifiers	
Excellent location	+2
Good location	+1
Average location	+0
Poor location	-1
Very poor location	-2
Installing bug to run off of power at the bugged locale	-1
Find and use a natural antenna	-3
Snuggling	-3
Planting Wiretaps	
Planting wiretap in...	
Telephone set, or room where set is located	+2
Line in same building	+0
Line outside but within 1 city block of building	-2
Line 1-3 city blocks away	-4
Line over 3 city blocks away	-6
Fiber optic cable	-2 to -5
Operating Bugs	
Improving poor reception (if possible at all)	-3
Sweeping For Bugs	
Amount/quality of hiding places	
Exceptional capacity for hiding bugs	-4
Good capacity for hiding bugs	-2
Average capacity for hiding bugs	-0
Poor capacity for hiding bugs	+2
Very poor capacity for hiding bugs	+4
Disguised bug	-2 to -5

Equipment

Except for the Fantasy application (Eavesdropping) described below, characters cannot perform Bugging without equipment: the hidden microphones, concealable miniature cameras, and the other "bugs" from which the Skill takes its name.

OBTAINING BUGGING EQUIPMENT

Generally, characters with Bugging have access to a small supply of bugs and bugging equipment of average quality. Specifically, a character who buys a full INT-Based Roll for Bugging has three bugs, chosen from the following (which are described below): Standard Audio Bug, Standard Visual Bug, Wiretap, Lineman's Telephone, Phone Call Rerouter. The character also has the monitors and other equipment needed to use these bugs once they're planted. (If a character buys a Familiarity with Bugging, he has either one such device or none, at the GM's option.)

If the GM prefers not to give characters Bugging equipment for free, or if characters want more or better equipment, they can obtain it by buying the devices with Character Points (or, in Heroic campaigns, with money). In this case, characters may apply the "5 Character Points doubles the number of a piece of equipment the character has" rule to his free bugs (for example, if a character chose a Wiretap as one of his free bugs, by paying 5 Character Points, he could have a second Wiretap; by paying 10 Character Points, he could have four Wiretaps). Note that the authorities monitor the sale of many types of Bugging equipment; some Bugging gear is only available to licensed telephone or security personnel.

GENERAL BUGS

STANDARD VISUAL BUG

Effect: Clairsentience (Sight Group)
Target/Area Affected: Special
Duration: Constant
Range: 800"
Charges: 1 Continuing Fuel Charge
Breakability: 7 DEF

Description: This is the typical sort of device used for visual electronic surveillance of a fixed location. It broadcasts what it "sees" over a range of one mile. Unless there's a direct wire connection between the bug and the reception equipment (which is unlikely), anything that interferes with radio transmissions can disrupt the bug's transmission temporarily or permanently. Because it's an Obvious Focus, a character has to use his *Concealment* Skill (with Bugging as a Complementary Skill) to hide it.

This bug has an internal battery able to power it for up to one week (the longer the bug's range, the larger its batteries have to be, and thus the larger it has to be). If the character makes his Bugging roll at the appropriate penalty (see above), he can connect the bug to the power at the location being surveilled so it runs indefinitely.

Real-world bug designers have to take many different factors into account. Crystal-controlled bugs have better sound quality, but the technology costs more. FM bugs have better sound quality than AM ones, but AM bugs have longer range for the same power. Spread spectrum technology makes bugs harder to find, but more expensive. For the most part, these factors don't affect the game too much, but players and GMs may want to keep them in mind for roleplaying purposes.

The larger a bug, the larger the batteries it can have to power it... but the easier it is to detect. Some visual bugs are extremely small (for example, pinhole lenses about 1/8 inch across), but most are at least a little larger than that.

Game Information: *Clairsentience (Sight Group), 8x Range (800", or 1 mile), 1 Continuing Fuel Charge (battery, Easy to obtain; 1 Week; +¾) (61 Active Points); OAF (-1), No Range (character must place bug at perception point before he can use the power; -½), Affected As Radio Group As Well As Sight Group (-¼). Total cost: 22 points.*

Options:

1) High-Powered Bug: Increase to 16x Range (1,600"). 70 Active Points; total cost 25 points.

2) Low-Powered Bug: Decrease to 2x Range (200"). 44 Active Points; total cost 16 points.

3) Standard Audio Bug: This is the same sort of bug, but it picks up and transmits sound rather than visual images. Some of them are as small as pencil erasers. Change to Clairsentience (Hearing Group). 61 Active Points; total cost 22 points.

4) Standard Visual And Audio Bug: This bug picks up and transmits both visual images and sound. Change to Clairsentience (Sight and Hearing Groups). 79 Active Points; total cost 29 points.

THE RANGE OF BUGS

Given ideal conditions — the best equipment, lots of power, the right transmitting frequency, the right antennae, lack of obstacles, optimum environmental conditions — some bugs can have a range of miles. However, perfect conditions rarely occur, and in some situations the range of a bug may be as little as a few hundred feet. Thus, in the interests of dramatic sense or "realism," the GM should adjust the range of the bugs described in the text as he sees fit.

5) Landline Connection: This bug has a direct, wired connection between itself and the unit that receives the image it transmits, making it much more difficult to disrupt the transmission. Remove Affected As Radio Group As Well As Sight Group (-¼). Total cost: 24 points.

6) Disguised Bug: This form of the Standard Bug is built into, or made to look like, an everyday object — a radio, a clock, a smoke detector, or just about anything else you can think of. Someone who examines the bug closely or takes it apart will soon realize what it is (or at least that it's not what it looks like). Change OAF (-1) to IAF (-½):

27 Standard Visual

27 Standard Audio

35 Standard Visual And Audio

7) Hard-To-Find Bug: This bug's transmissions are particularly difficult to find with bug detectors. This includes:

■ bugs built with spread spectrum technology (which "spreads" a signal over a larger portion of the radio spectrum, making it harder for an eavesdropper to pick it all up, and giving it a longer broadcast range to boot);

■ bugs built with burst-transmission technology (which "save" what they receive and periodically broadcast it in very short bursts, instead of broadcasting continuously);

■ visible light microphones (which attach a mike to a lightbulb, such as the one in a lamp; as the mike picks up sounds, it channels them into a circuit that varies the brightness of the bulb; the variation of the bulb isn't visible to people in the room, but is visible with the viewing equipment trained on it);

■ bugs that broadcast via microwaves or infrared light (which limits where they and their receivers can be placed, since they broadcast in a straight line); and

■ bugs that broadcast on the low-frequency AM bands that many bug detectors don't tune to.

Usually bugs like these are a little larger than normal, and thus harder to hide and easier to find than a normal bug. Add Concealed (-6 to PER Rolls with Detect Bugs).

26 Standard Visual: 72 Active Points

26 Standard Audio: 72 Active Points

32 Standard Visual And Audio: 89 Active Points

32 Disguised Standard Visual: 72 Active Points

32 Disguised Standard Audio: 72 Active Points

39 Disguised Standard Visual And Audio: 89 Active Points

8) Undercover Agent Audio Bug: This "bug" is a listening device worn by an undercover police officer (or the like). Concealed under the clothes, it transmits voices and noises in the wearer's vicinity to a nearby receiver. To the Standard Audio Bug, add Mobile Perception Point. 70 Active Points; total cost 25 points (for an OAF version) or 31 points (for an IAF version disguised as a pen, a calculator, a watch, or the like).

CONCEALED TAPE RECORDER

Effect: Eidetic Memory, Audio Only
Target/Area Affected: Special
Duration: Persistent
Range: Special
Charges: 1 Continuing Fuel Charge
Breakability: 1 DEF

Description: This device is a small tape recorder designed to record all noises in its vicinity (some types are noise-activated and record anything they "hear"; other types have to be turned on and off remotely). Although it's meant to be hidden in the area to be "bugged," the device is obviously a tape recorder when viewed or examined. The batteries and tape have a lifespan of approximately 10 hours.

Concealed tape recorders have one big advantage compared to broadcasting bugs: since they broadcast no signals, they can't be found by most bug detectors, which detect such signals. But they suffer from one major drawback: after infiltrating the area to be bugged and hiding the recorder, the user has to sneak back in to retrieve full tapes and replace them with fresh ones.

Game Information: *Eidetic Memory (5 Active Points); OAF (-1), Audio Only (-1), 1 Continuing Fuel Charge (batteries and tapes, Easy to obtain; 10 Hours; -0). Total cost: 2 points.*

Options:

1) Disguised Tape Recorder: This form of the device isn't meant to be hidden; instead, it looks like some ordinary object (such as a lamp, clock radio, or smoke detector). Change OAF (-1) to IAF (-½). Total cost: 2 points.

2) Wearable Tape Recorder: This Concealed Tape Recorder is meant to be worn by an undercover police officer or the like. It's much smaller and more easily hidden, but also has a shorter tape and battery life. Change to 1 Continuing Fuel Charge (batteries and tapes, Easy to obtain; 2 Hours; -0). Total cost: 2 points.

3) Keyboard Recorder: This tiny device attaches to a computer keyboard, where it records up to 1,000 keystrokes. If placed right before someone starts up the computer, it's possible it will capture passwords, screen names, account numbers, and other useful data before becoming full. Change Audio Only (-1) to 1,000 Keystrokes Only (-2). Total cost: 1 point.

CONTACT MICROPHONE

Effect: Clairsentience (Hearing Group)
Target/Area Affected: Self
Duration: Constant
Range: No Range (see text)
Charges: 1 Continuing Fuel Charge
Breakability: 4 DEF

Description: Often called a "spike mike," this device is a microphone on the end of a nail or spike. The user gets on the outside of the wall he wants to hear through and hammers or forces the spike into the wall so that the microphone touches, but does not penetrate, the wall's inner side. Then he can hear noises and voices in that room.

Game Information: *Clairsentience (Hearing Group) (20 Active Points); OAF (-1), No Range (Clairsentience can only be used to hear through the wall the microphone is placed in; -½), 1 Continuing Fuel Charge (battery, Easy to obtain; 1 Hour; -0). Total cost: 8 points.*

LASER MICROPHONE

Effect: Clairsentience (Hearing Group)
Target/Area Affected: Self
Duration: Constant
Range: 100"
Charges: 1 Continuing Fuel Charge
Breakability: 4 DEF

Description: This ingenious device, which is powered by batteries or being plugged into an electrical socket, reflects a laser beam off a window (or similar piece of glass) to record the vibrations in the glass made by speakers (and other sources of noise) inside the room, then determines what's being said by analysing the pattern of the vibrations.

While it's very useful in many situations, the Laser Microphone suffers from some significant drawbacks. First, it only works if there's a window to listen "through." Second, it has to be placed so the laser beam strikes the window at a 90 degree angle (or nearly so), so that the telescope that picks up the return beam and focuses it on the circuit works properly. This requires a Bugging roll, and the GM may rule that it's impossible based on the layout of the land. (Alternately, there can be a separate receiver set up to receive the laser as it bounces off the glass at an angle, but this requires more work and entails more risk of exposure.) Third, conditions that interfere with laser beams (fog, snow, and so on) may stop the device from working, or at least significantly lessen the quality of the audio reception. Fourth, the laser makes a visible "dot" on the window. Fifth, and worst of all, any other vibrations affecting the window make it harder (or impossible) to listen to conversations. For example, a Laser Microphone won't work on windows near busy roads, and the simple expedient of turning on a fan or a radio and placing it next to the window defeats a Laser Mike altogether. Similarly, drawing the curtains or otherwise shielding the window from interior vibrations may stop the device from working or make the reception much worse.

Game Information: *Clairsentience (Hearing Group) (20 Active Points); OAF (-1), Requires A Bugging Roll (-½), Only Works Via Windows (see text; -1), Will Not Work Around Strong Vibrations (see text; -1), 1 Continuing Fuel Charge (battery, Easy to obtain; 1 Hour; -0). Total cost: 4 points.*

Options:

1) Short-Range Laser Microphone: This less efficient form of Laser Mike only works over a much shorter range. Add Limited Range (30"; -¼). Total cost: 4 points.

2) Microwave Microphone: This device works similarly, but it uses a broadcast microwave beam instead of a laser. This has some benefits (such as the laser "dot" not being visible on the window), but is otherwise largely the same. 20 Active Points; total cost 4 points.

TELEPHONE BUGS AND RELATED DEVICES

WIRETAP

Effect: Clairsentience (Hearing Group), Only For Defined Phones
Target/Area Affected: Defined phone(s)
Duration: Constant
Range: 800" (see text)
Charges: 1 Continuing Fuel Charge
Breakability: 7 DEF

Description: This bug is installed in a telephone (or, in some cases, on a telephone trunk line leading to an entire office, entire building, or the like; see the main text). It picks up and transmits all conversation that takes place over that phone, but doesn't hear other sounds.

Game Information: *Clairsentience (Hearing Group), 8x Range (800", or 1 mile), 1 Continuing Fuel Charge (battery, Easy to obtain; 1 Week; +¾) (61 Active Points); OAF (-1), No Range (character must place bug at perception point before he can use the power; -½), Can Only Hear Sound From Specific Telephone(s) (-1), Affected As Radio Group As Well As Sight Group (-¼). Total cost: 16 points.*

Options:

1) Strong Wiretap: Increase to 16x Range (1,600"). 70 Active Points; total cost 19 points.

2) Weak Wiretap: Decrease to 2x Range (200"). 44 Active Points; total cost 12 points.

3) Fax Tap: Similar devices exist to monitor and capture information coming through fax machine phone lines. Change to Clairsentience (Radio Group). Total cost: 16 points.

LINEMAN'S TELEPHONE

Effect: Clairsentience (Hearing Group)
Target/Area Affected: Special
Duration: Constant
Range: 800" (see text)
END Cost: 0
Breakability: 10 DEF

Description: Although not exactly a bug, this device is a must-have for characters who often need to listen in on phone conversations. It's the type of telephone carried by telephone repairmen — it connects via alligator clips to the red and green wires of any telephone line and lets the user listen to conversations on that line. The "tap" is not detectable by the persons using the line. Some newer versions can access fiber optic lines, though they cannot separate out one conversation among the many on a single strand of cable.

Game Information: *Clairsentience (Hearing Group), 8x Range (800", or 1 mile), Reduced Endurance (0 END; +½) (52 Active Points); OAF (-1), Only To Listen To Conversations On Accessible Phone Lines (-½), Affected As Radio Group As Well As Sight Group (-¼). Total cost: 19 points.*

Options:

1) Strong Lineman's Telephone: Increase to 16x Range (1,600"). 60 Active Points; total cost 22 points.

2) Weak Lineman's Telephone: Decrease to 2x Range (200"). 37 Active Points; total cost 13 points.

PHONE CALL REROUTER

Effect: Change Environment (reroute phone calls)
Target/Area Affected: 1" Radius (see text)
Duration: Constant
Range: No Range (see text)
Charges: 1 Continuing Charge
Breakability: 1 DEF

Description: When installed in a telephone, this device reroutes all calls made from that phone to a designated receiver of the character's choice. The character must specify the "destination phone" when he installs the Rerouter, but when a call comes in to the destination phone he can choose to let it go on to its intended number instead of taking it himself. (In that case he cannot listen in on the call; for that he needs to install a Standard Audio Bug as well.)

Game Information: *Change Environment 1" radius (reroute phone call to designated receiver), 1 Continuing Fuel Charge (battery, Easy to obtain; 1 Week; +¾) (9 Active Points); OAF (-1), No Range (character must place Rerouter in target phone before he can use the power; -½), Only Affects Single Designated Phone Within Radius (-¼). Total cost: 3 points.*

PHONE DISABLER

Effect: Darkness to Radio Group
Target/Area Affected: 4" Radius (see text)
Duration: Constant
Range: No Range (see text)
Charges: 1 Continuing Charge
Breakability: 4 DEF

Description: This device blocks all incoming and outgoing calls to the target phone(s). It's typically placed on a specific phone, but could be placed on, for example, the main phone line leading into a building to cut off that entire building. (For game purposes, the 4" radius of the power is considered sufficient to disable phone service to any building, unless the GM prefers to rule otherwise for dramatic purposes.)

Alternately, characters can use this device simply to frustrate and annoy the target. Instead of setting it up to route calls to a specific number, they set it up so that every time a number is dialed from the target phone, it connects to a wrong number.

Game Information: *Darkness to Radio Group 4" radius, 1 Continuing Fuel Charge (battery, Easy to obtain; 1 Week; +¾) (35 Active Points); OAF (-1), No Range (character must place Disabler in target phone before he can use the power; -½), Only To Block Calls To/From Designated Phone(s) (-¼). Total cost: 13 points.*

Options:

1) One-Way Phone Disabler I: This more insidious form of Phone Disabler is used for corporate espionage and like purposes. It allows the target phone to make calls out normally — but not to receive them. Anyone who calls that phone will hear it ringing, but the phone will not actually ring, so the person being called won't know he's receiving a call. Add Personal Immunity (effect as described above; +¼). 40 Active Points; total cost 14 points.

2) One-Way Phone Disabler II: This device functions like One-Way Phone Disabler I, but with an added twist — anyone calling the target phone hears a message that the phone has been disconnected! Character also buys: Images to Hearing Group 1" radius, 1 Continuing Fuel Charge (battery, Easy to obtain; 1 Week; +¾) (9 Active Points); OAF (-1), No Range (character must place Disabler in target phone before he can use the power; -½), Set Effect (disconnected phone message; -1). Total cost: 2 points.



TELEPHONE MICROPHONE

Effect: Clairsentience (Hearing Group)
Target/Area Affected: Special
Duration: Constant
Range: Planetary (see text)
Charges: 1 Continuing Charge
Breakability: 25 DEF

Description: This ingenious device, also known as an "infinity transmitter" or "harmonica bug," turns a telephone into a "microphone" through which the character can listen to conversations and other sounds near the phone after it's been hung up (or in some cases, before it's ever picked up, by using a broadcast tone to activate the device but not cause the phone to ring). After calling the phone to which the Telephone Mike is attached, the character only has to let the target hang up first. Until the character himself hangs up, the other phone acts as a microphone, picking up the sounds near it (in the same room, typically).

Game Information: *Clairsentience (Hearing Group), 200,000x Range (sufficient for installation in any phone on Earth), 1 Continuing Fuel Charge (battery, Easy to obtain; 1 Week; +¾) (192 Active Points); OAF (-1), No Range (character must place bug at perception point before he can use the power; -½), Affected As Radio Group As Well As Sight Group (-¼). Total cost: 70 points.*

Options:

1) Telephone Hold Microphone: A variant on this device is the Telephone Hold Microphone, which the character installs in his own telephone. When someone calls him, he puts the caller on hold and activates the device, which then allows him to listen to conversations and sounds at the caller's position. Remove No Range (-½). Total cost: 55 points.

TELEPHONE RECORDER

Effect: Eidetic Memory, Only For Defined Phones
Target/Area Affected: Defined phone(s)
Duration: Persistent
Range: No Range
Charges: 1 Continuing Charge
Breakability: 1 DEF

Description: This device is essentially a miniaturized tape recorder that records up to eight hours of conversation on the phone lines it's wired into. It's activated by voice, so no tape is wasted. Since it doesn't broadcast what it tapes, the character has to re-enter the premises and physically recover it before he can listen to what it recorded.

Game Information: *Eidetic Memory (5 Active Points); OAF (-1), Only For Memorizing Conversations On Defined Phone(s) (-2), 1 Continuing Fuel Charge (tape, Easy to obtain; 8 Hours; -0). Total cost: 1 point.*

Options:

1) Strong Recorder: Increase Fuel Charge to 12 Hours' duration. Total cost: 1 point.

2) Weak Recorder: Decrease Fuel Charge to 6 Hours' duration. Total cost: 1 point.

3) Telephone Log: This form of the Telephone Recorder doesn't record conversations. Instead, it keeps a record of all incoming/outgoing calls to/from the phone it's attached to, noting the numbers involved, the time of the call, the length of the call, and other pertinent information. Change Only For Memorizing Conversations (-2) to Only For Recording Incoming/Outgoing Call Information For Defined Phone(s) (-3). Total cost: 1 point.

VOICE ALTERER

Effect: Mimicry 20-, Only To Alter Character's Speech
Target/Area Affected: Self
Duration: Constant
Range: Self
END Cost: 0
Breakability: 5 DEF

Description: This device attaches to the character's phone. It allows him to alter the sound of his voice. He can change the pitch and tone of his speech so that he sounds older, younger, of a different gender, or simply different. He cannot, however, make his voice sound like that of a specific other person.

Game Information: *Mimicry 20- (25 Active Points); OAF (-1), Only To Alter Character's Speech (see text; -1). Total cost: 8 points.*

Options:

1) Strong Voice Alterer: Increase to Mimicry 24-. 33 Active Points; total cost 11 points.

2) Weak Voice Alterer I: Decrease to Mimicry 16-. 17 Active Points; total cost 6 points.

3) Weak Voice Alterer II: Some cruder types of Voice Alterers change the user's voice so that it's not identifiable, but is obviously altered or disguised. Change Only To Alter Character's Speech (-1) to Only To Alter Character's Speech Into Obvious Alteration (-1½). Total cost: 7 points.

4) Variant Voice Alterer: Change to Shape Shift (Hearing Group; any humanoid voice) (15 Active Points); OAF (-1), Only To Alter Character's Speech (see text; -1). Total cost: 5 points.

TRACKING BUGS

TRACKING BUG

Effect: Images to Radio Group, +4 to PER Rolls
Target/Area Affected: 32" Radius
Duration: Constant
Range: RBS
Charges: 1 Continuing Recoverable Charge
Breakability: 15 DEF

Description: This is a device characters can attach to cars and other moving objects to follow them. It emits a distinctive radio signal that denotes the bug's location. Tracking the beacon requires any specialized Radio-perceiving device (one such device is assumed to come with the Tracking Bug when the character buys it, but he could also use other radio equipment if necessary).

The Tracking Bug can reliably be "picked up" on tracking equipment primarily within a 32" radius. However, much like a character can see the beam from a flashlight from far away without being inside the beam, characters outside the 32" radius may still be able to track the Tracer, if the GM so permits: from 33-64", the Image is at only +2 to PER Rolls; from 65-125", it's at +0; from 126-250" it's at -2; beyond that it would require an Extraordinary Skill Roll to locate it.

Game Information: *Images to Radio Group, +4 to PER Rolls, Increased Size (32" radius; +1¼), Usable As Attack (allows character to "stick" the Image to a target; +1), Range Based On STR (+¼),1 Continuing Recoverable Charge lasting 1 Week (stops functioning if it gets wet or experiences severe radio interference; +1) (76 Active Points); IAF (-½), Set Effect (detectable signal; -1), Image Only Perceivable On Special Radio Frequencies (-0). Total cost: 30 points.*

Options:

1) Strong Bug: Increase to +6 to PER Rolls. 103 Active Points; total cost 41 points.

2) Weak Bug: Decrease to +2 to PER Rolls. 49 Active Points; total cost 20 points.

3) Broad-Signal Bug: Increase to Increased Size (125" radius; +1¾). 85 Active Points; total cost 34 points.

OTHER SURVEILLANCE DEVICES

TEMPEST GEAR

Effect: Detect Computer Radio Emissions 14-
Target/Area Affected: Self
Duration: Persistent
Range: Special
Charges: 1 Continuing Fuel Charge
Breakability: 2 DEF

Description: TEMPEST stands for "Transient Electromagnetic Pulse Emanation STandard." It refers to the amount of electromagnetic radiation given off by various types of computer equipment (monitors, cables, motherboards, and so forth). Using what's known as "van Eck" technology (after the scientist who developed the process), TEMPEST gear can monitor and record everything that passes across a computer's screen by perceiving and "reading" the electromagnetic radiation. This won't necessarily work over long distances (the normal rule for how the Range Modifier affects PER Rolls applies), and anything that provides the computer with Power Defense automatically blocks TEMPEST reading (so will placing a sheet of metal between the computer and the TEMPEST gear).

Game Information: *Detect Computer Radio Emissions 14- (Radio Group) (10 Active Points); OAF (-1), Blocked By Power Defense (-½), 1 Continuing Fuel Charge (batteries, Easy to obtain; 10 Hours; -0). Total cost: 4 points.*

Options:

1) Longer-Range TEMPEST Gear: Add Telescopic (+4 versus Range Modifier for TEMPEST Gear). 12 Active Points; total cost 5 points.

BUG DETECTORS AND DISRUPTORS

BUG DETECTOR

Effect: Detect Bugs 16-
Target/Area Affected: Self
Duration: Constant
Range: 10"
Charges: 1 Continuing Charge
Breakability: 4 DEF

Description: This devices detects bugs by perceiving the radio waves they generate. This means it only detects "active" bugs — bugs transmitting while the Detector is in use. Bugs that are turned off or inactive cannot be detected (and some types of bugs are harder to detect than others), nor can bugs using infrared light or media other than radio waves. Its batteries provide enough power for a total of one hour of operation.

Game Information: *Detect Active Bugs 16- (Radio Group), Increased Arc Of Perception (360 Degrees) (17 Active Points); OAF (-1), Affected As Sight Group As Well As Radio Group (-½), Limited Range (10"; -¼), 1 Continuing Charge (Easy to replace batteries, 1 Hour; -0). Total cost: 6 points.*

Options:

1) Strong Bug Detector: Increase to Detect Active Bugs 20-. 21 Active Points; total cost 8 points.

2) Weak Bug Detector: Decrease to Detect Active Bugs 13-. 14 Active Points; total cost 5 points.

3) Nonlinear Junction Detector: This form of bug detector can find bugs even when they're turned off by broadcasting microwaves that detect the harmonics from the transistors used in bugs. However, it won't work against bugs shielded inside metal cases. Change to Detect Bugs 16- (Radio Group) and add Cannot Perceive Properly-Shielded Bugs (-¼). Total cost: 6 points.

4) Microwave Bug Detector: This device detects microwave bugs and microphones by perceiving the microwaves they give off. Change to Detect Microwaves 16- (Radio Group). 17 Active Points; total cost 6 points.

5) Tape Recorder Detector: This device detects the bias (ultrasonic sound) given off by most tape recorders. Change to Detect Tape Recorder 16- (Hearing Group). 17 Active Points; total cost 6 points.

6) Microphone Detector: This device emits ultrasonic sound that causes microphones in the area to oscillate. This not only jams the microphone, it causes some types of mikes to emit a whistling sound by which they can be detected. It does not work on all microphones; carbon mikes and the mikes in some tape recorders won't respond to this device. Change to Detect Microphone 16- (Hearing Group) (17 Active Points; total cost 6 points) and also buy a White Noise Generator (see below). Total cost: 25 points.

WHITE NOISE GENERATOR

Effect: Change Environment (-10 to Hearing Group PER Rolls), Only Versus Audio Bugs
Target/Area Affected: 8" Radius
Duration: Constant
Range: No Range
Charges: 1 Continuing Charge
Breakability: 9 DEF

Description: This device generates "white noise" — low-level ultrasonic sound that doesn't interfere with normal conversation, watching television, or the like, but which makes bugs useless.

Game Information: *Change Environment 8" radius (generate white noise that makes it difficult to use hearing devices), -10 to Hearing Group PER Rolls (47 Active Points); OAF (-1), No Range (-½), 1 Continuing Fuel Charge (Easy to replace batteries, 1 Hour; -0). Total cost: 19 points.*

Options:

1) Strong White Noise Generator: Increase to -12 to Hearing Group PER Rolls. 53 Active Points; total cost 21 points.

2) Weak White Noise Generator: Decrease to -8 to Hearing Group PER Rolls. 41 Active Points; total cost 16 points.

Other Information

POWERS AND BUGGING

Most of the bugs described above are built with Clairsentience or some Enhanced Sense. Characters who naturally possess those Senses, such as some *Champions* superheroes, may have no need for bugs. Powers like Invisibility, Telekinesis, and Teleportation may make it much easier to place and retrieve bugs.

CONSEQUENCES OF FAILURE

Unsuccessful Bugging rolls can mean the character used the wrong bug for the job, his equipment broke, he improperly placed the bug, environmental noise (or the like) makes the bug useless, and so forth. In short, he can't observe the location where the bug was planted as he planned. The effects of failure for specific tasks are described above.

If a character fails a Bugging roll badly (by 4 or more), additional negative consequences result. The bug may be so obvious to everyone but him that it's easily discovered, he causes some damage at the scene that he can't fix, he breaks the bug or a tool, or the like.

BASE TIMES

Here are the typical minimum Base Times for Bugging (tasks may sometimes take significantly longer, depending on the genre and the situation):

■ planting bugs: 1 Minute (often longer)

■ operating bugs: varies, depending on how long the character wants to listen and/or watch, whether he has recording equipment set up, and so forth.

■ sweeping for bugs physically: 1 Minute for an Average room no larger than 3" x 3" (the larger the room, and the better the amount/quality of hiding places, the longer it takes; the smaller or worse the room, the less time it takes)

■ sweeping for bugs with bug detector: 1 Turn for an Average room no larger than 3" x 3" (again, the size and quality of the room can affect the time required)

■ disable/counteract bug: 1 Turn

■ create bug: 1 Hour or more, depending on sophistication of bug, tools available, and the like (see text)

SUBDIVIDING BUGGING

In campaigns where characters use Bugging a lot, the GM may want to split it into four Intellect Skills: Place/Use Bugs (does not allow wiretapping); Counterbugging (finding, disabling, and fooling bugs); Wiretapping; and Create Bugs. Alternately, creating bugs might fold into Electronics, with any of the other three Skills as Complementary.

BUGGING BY GENRE

Bugging functions the same in the modern-day and future genres (though the type and sophistication of equipment used may increase in Cyberpunk and Science Fiction settings). Changes in communication and sensor technology may alter the way a character uses Bugging, but the basic nature of the tasks involved typically remains the same.

Fantasy

At the GM's option, Fantasy characters can interpret Bugging as *Eavesdropping,* the ability to find the best places from which to spy on and overhear people. In this case, Eavesdropping acts as a Complementary Skill for the character's PER Roll when he attempts to overhear or spy on someone. Eavesdropping may also Complement the *Shadowing* Skill in some situations.

Pulp

Audio and visual bugs are available in the Pulp era; wiretapping is also possible. However, these devices aren't nearly as small and concealable as they are in the modern day. The GM may want to impose penalties of -2 (or more) on Bugging (and related Concealment) rolls to reflect the poorer, more obvious technology.

Science Fiction

On twenty-first century Earth, surveillance devices are already fantastically small and easy to conceal, and future advances in nanotechnology will only make them harder to find. Advanced bugs may actually be tiny robot insects, capable of crawling into a room to eavesdrop. The technological arms race is particularly intense in bugging — obsolete bugs or countermeasures suffer from large penalties. See *Obsolete And Advanced Technology,* page 39.

BUREAUCRATICS

Type: Interaction (roll: 9 + (PRE/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

A character with this Interaction Skill can deal with bureaucrats, cut through red tape, and extract information from bureaucracies and similar organizations. Similarly, he knows how to make a bureaucracy or like organization take action on his behalf. He also knows the right people to talk to (for just about anything) and how to reach them (or can easily find out who they are). Bureaucratics comes in handy when characters need travel papers in a foreign country, must go through Customs, have to arrange an appointment, and so on.

Characters should roleplay the use of Bureaucratics as much as possible, with the GM allowing a character to make rolls at crucial points in the scene to determine the character's rate of progress or degree of success. If the roll is part of a Skill Versus Skill Contest and one of the characters doesn't have Bureaucratics, the GM can allow him to make a PRE Roll at -3 instead.

Complementary Skills

Like many other Interaction Skills, Bureaucratics often benefits heavily from Complementary Skills. Some of the most commonly-used ones include:

■ Bribery (in some cultures, giving a bureaucrat a bribe may be expected, necessary, and not even looked upon as corrupt; in others it's just a good way to take advantage of an official's venality)

■ Conversation (when the character needs to obtain information from a bureaucrat or official)

■ High Society (a crucial Complementary Skill in settings where bureaucrats and officials are high-ranking members of society, or in cultures like medieval Japan where knowing *how* to talk to someone is as important as knowing who to talk to)

■ Knowledge Skills (of the bureaucracy/organization in question, the locale, or the local culture, as appropriate)

■ Persuasion and Seduction (when the character interacts directly with a bureaucrat or official whom he can influence with his charms)

■ Science Skill (of a Science that's relevant to a technical request of some sort)

■ Contact (if the character has a Contact within the organization, the GM may want to treat the Contact roll as Complementary to Bureaucratics to determine if the Contact can help the character, and if so how well)

■ Membership (if a character has Membership in the organization whose bureaucracy he's trying to manipulate or control, the GM might provide a bonus to Bureaucratics equal to the points of Membership the character has [or half those points, or some other percentage])

BUREAUCRATICS TASKS

The following are some of the tasks characters can perform with Bureaucratics. Don't forget to apply the modifiers from the Bureaucratics Modifiers table, if appropriate.

Obtain/Hide Information

Perhaps the most common thing characters do with Bureaucratics is to obtain information. They might want to get a look at an NPC's personnel file, obtain a copy of the architectural plans for a particular building, learn who's in charge of a particular mission, or the like.

The primary modifier for this task is the nature of the information in question — the more confidential, sensitive, or secret it is, the harder a time the character have finding it out. (In some cases, a character must have a *Security Clearance* Fringe Benefit to access classified information; without one, Bureaucratics may not help him much, if at all.) The Bureaucratic Information table lists some suggested modifier values.

Typically a request for information has a Base Time of 1 Hour; this assumes the need for some searching through records, research, and/or waiting for a bureaucrat to bring the character the necessary files. But some requests, particularly for access to publicly-available records, take much less time — even as little as 1-5 Minutes. If a character wants to rush the process (perhaps so he gets the information before someone else does), apply Immediacy modifiers.

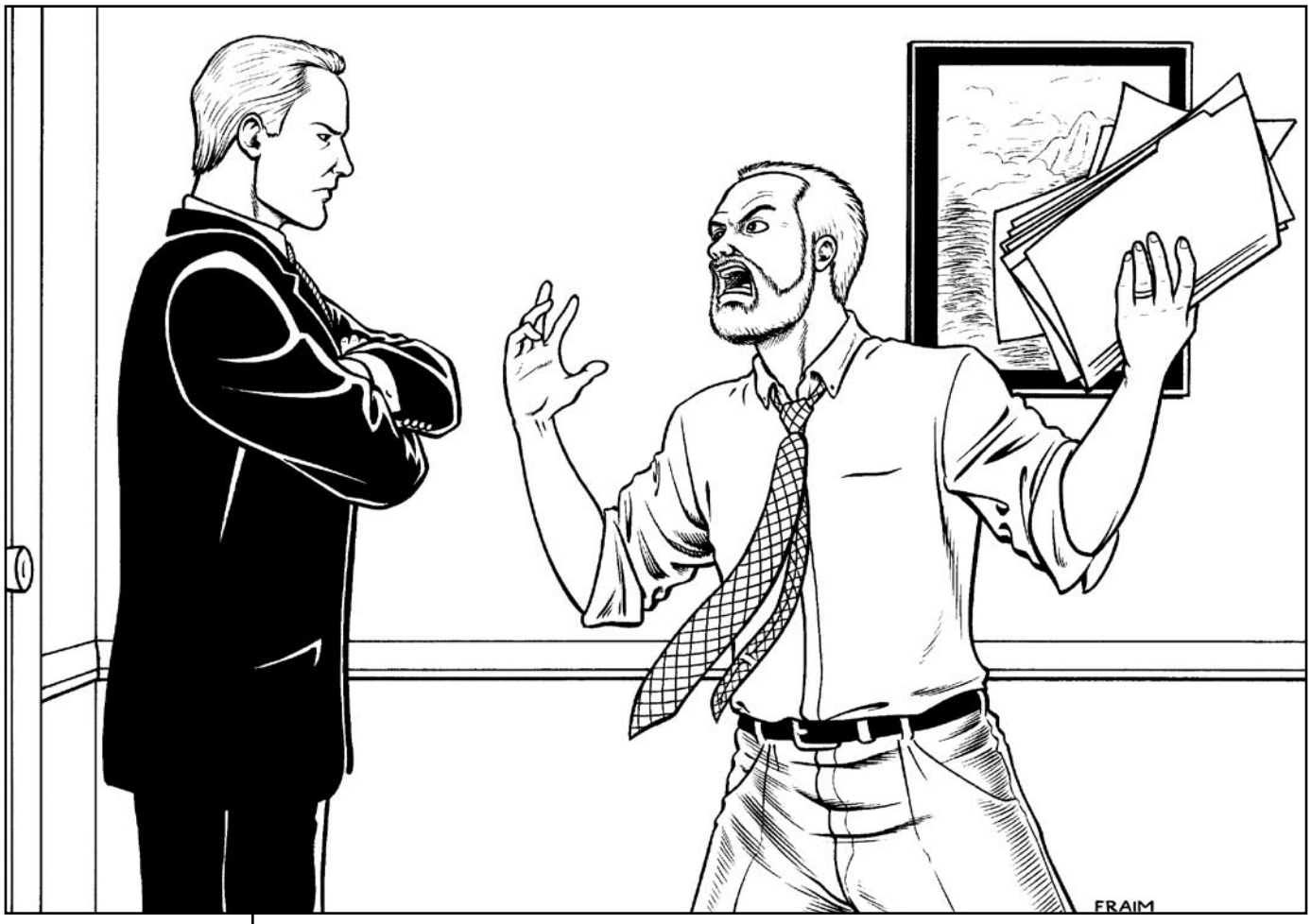
Similar to obtaining information is hiding information within the bureaucracy so others can't find it. The character misfiles documents, changes computer file names, and otherwise "misplaces" information without destroying it or getting rid of it. Usually this is done by a member of the organization who's trying to cover his tracks, thwart rivals within the group, conceal evidence of a crime, or the like. The character makes a Bureaucratics roll, and if he succeeds the GM records how much he made it by. This becomes the target for a Skill Versus Skill Contest when someone else uses Bureaucratics to find the information.

Obtain/Deny Permission, Approval, Or "Papers"

Bureaucracies usually have jurisdiction over a wide variety of subjects. They issue permits that allow work to be done, grant approval for many different projects and jobs, and so forth. Examples include city planners' offices approving construction projects and rezoning requests, or a school board having to give permission for a child to change schools. In many times and places bureaucrats are also responsible for pro-

BUREAUCRATIC INFORMATION

Type Of Information	Modifier	Examples/Notes
Public	+2	Deeds, non-sealed court filings, adults' criminal records
Non-Public	-0	Sealed court records, juvenile criminal records
Confidential/Sensitive	-2	Building security plans, personnel files, medical records
Classified	-4	Security Clearance (1+) required
Secret	-6	Security Clearance (5+) required
Top Secret	-8	Security Clearance (7+) required



viding people with identity cards, travel papers, ration cards, permission slips, passports, and other such official documentation.

Characters who need any of these things can make a Bureaucratics roll to get them. The GM should be sure to apply Difficulty modifiers; the more unusual or suspect a request, the harder it is for the character to get what he wants. The Base Time for getting permission, approval, or papers is usually 1 Day to 1 Week — the more out of the ordinary the request, the longer it takes. Sometimes the character may have to resort to Bribery, Forgery, or other Skills to avoid the bureaucratic hassles.

In some cases, a character may want to pull strings to make it more difficult for someone to get permission, approval, or papers. In this case, he makes a Bureaucratics roll in a Skill Versus Skill Contest against the person making the request.

Know Who's Who

A character can make a Bureaucratics roll to determine who's who within a bureaucracy or like organization. He can find out who he has to talk to about a particular subject or area of concern (and how to contact that person). He also knows generally how the organization is structured — who has authority over whom, which bureaucrat has jurisdiction over which decisions, and so forth.

Of course, this knowledge doesn't spring full-blown into the character's head as if by magic. Unless he has a KS of the organization, typically he has to consult publicly-available sources of information, make a few phone calls, and so forth. This may take as much as 1 Hour, but often less.

Arrange/Deny Appointments And Meetings

Once the character knows who's in charge of what, he can use Bureaucratics to arrange an appointment or meeting with someone he needs to speak to. The GM should always apply the Membership modifier from the Bureaucratics Modifiers table to "obtain meeting" rolls; the more important someone is, the harder it tends to be to get his attention. (The character's own Membership in the organization, if any, may partially or fully compensate for this by providing a bonus.) The character might be able to obtain some positive modifiers by misrepresenting what he's after, claiming an equal rank in a similar organization, sweet-talking the official's secretary (Persuasion or Seduction as Complementary Skill Rolls), or pretending to have something the target really, really wants.

In some cases, a character may want to prevent someone from arranging an appointment. In this case, he makes a Bureaucratics roll in a Skill Versus Skill Contest against the person making the request.

Use Organizational Resources

Most bureaucracies and like organizations have a lot of resources at their disposal. These range from mundane office equipment (computers, envelopes, telephones), to slush funds, to vehicles, to the police evidence locker, to hotel rooms or residences — it all depends on the nature, importance, and wealth of the

organization. With a Bureaucratics roll and a Base Time of 1 Hour to process the request, a character can obtain access to these resources and make use of them. Difficulty modifiers definitely apply; it's one thing to convince a bureaucrat to let you make a call from his phone, but quite another to get free use of the company jet for a week.

Prompt/Delay Organizational Action

Obtaining approval or an appointment is tricky enough, but sometimes a character may need to spur an entire bureaucratic organization to action! For example, a character who belongs to an intelligence agency may want to convince the agency to use its influence and resources to free a particular political prisoner, while one who works for a corporation may want to get it to invest in and support a particular deal. This requires a Bureaucratics roll (with standard modifiers) and usually has a long Base Time — at least 1 Day, but often 1 Week or more. The same applies to efforts to delay or misdirect organizational action.

Media Manipulation

At the GM's option, characters may also be able to use Bureaucratics to manipulate the media. After all, media organizations are organizations like any other, and thus susceptible to deft and knowledgeable manipulation. A Bureaucratics roll would let a character know which reporter he should leak a story to, how to wheedle information out of a reporter before it becomes public, how to time the release of information to take advantage of the media's news cycle, how to talk with reporters, and so forth. The bigger or more important a story, the stronger the modifiers applied (positive if the character's using the story as a carrot to manipulate the organization or a reporter, negative if the character's trying to uncover the story before it breaks). (If the GM prefers not to assign this talent to Bureaucratics, characters can instead buy PS: Manipulate Media to do these things.)

EQUIPMENT

Bureaucratics doesn't involve or require any equipment; it's a purely personal Skill.

POWERS AND BUREAUCRATICS

Various Mental Powers may help a Bureaucratics attempt, or render it unnecessary. For example, Telepathy can discover what might persuade a bureaucrat to help the character (but the character has to achieve the +20 "victim does not know his mind is being read" level of effect, or else he'll tip off the subject). Even better is Mind Control; a sufficiently high Effect Roll with Mind Control removes the need for Bureaucratics. If the character is concerned he can't achieve a high enough roll, he can instead try for a subtler effect, such as EGO +10 to make the subject "do something he wouldn't mind doing" — that would be enough to convince a bored bureaucrat to help the character with a task that's not too far out of the ordinary.

CONSEQUENCES OF FAILURE

Unsuccessful Bureaucratics rolls typically result in the character's request being turned down — or worse, stalled forever in red tape. A badly-failed roll (by 4 or more) may cause the bureaucracy to report the character's request to the authorities, blacklist him, or create other inconveniences for him.

BUREAUCRATICS MODIFIERS

Complexity Of Organization	Modifier
Small and/or Simple	-0
Large and/or Complex	-1
Very Large and/or Very Complex	-2
Extremely Large and/or Extremely Complex	-4

Difficulty Of Request/Task	Modifier
Very Simple	+2
Simple	+1
Average	-0
Difficult	-2
Very Difficult	-4

Immediacy Of Request/Task	Modifier
Each step up Time Chart	-3 per step
Membership	-1 per point

Other Circumstances	Modifiers
Character wants to hide his actions	-3
Character wants to make it look as if someone else is responsible for his actions	-5
Character wants the results of his actions to go unnoticed by the organization	-3
Character wants the results of his actions to appear to be something else to the organization	-5
Request violates departmental policy	-2 or more
Request accords with departmental policy	+1 or more
Character has Membership in organization	+1 per point

Complexity: Generally, the larger and/or more complex a bureaucracy or like organization is, the harder it is to work with or manipulate. For some rolls, such as hiding information, the Complexity modifier may change from negative to positive.

Difficulty: The difficulty of a request/task may reflect not just now hard it is to accomplish, but how outrageous it is. Getting a police clerk to quickly look up a license plate number is one thing (Difficult task); asking him to let the character spend a few minutes alone in the Evidence Room is another thing altogether (Very Difficult task).

Immediacy: These modifiers are the same as the general modifiers for performing a task more quickly than normal. However, the GM may increase the modifier (to represent the difficulty of getting a large organization to act with dispatch) and/or decrease the reduction in time.

Membership: For many requests, such as arranging an appointment, manipulating a particular bureaucrat, and the like, the target's power within the organization influences Bureaucratics rolls. The more powerful he is (*i.e.,* the more points he's spent on the *Membership* Fringe Benefit, or any like Perk such as Governmental Rank), the harder he can be to work with. On the other hand, the character's own Membership rank (if any) provides a bonus.

BASE TIMES

Bureaucratic procedures usually take time, from several hours to several days. 1 Hour is usually the minimum; the text above lists some times for specific tasks. A character can get quicker action with a better Bureaucratics roll — use the Immediacy rules above (for every 3 full points a character makes his roll

by, reduce the time by one step up the Time Chart). Alternately, for every point by which he makes his roll, the GM should reduce the required time by 5-10% (maximum reduction of 50%, or half the normal time, in most circumstances).

SUBDIVIDING BUREAUCRATICS

In some campaigns, GMs may prefer that characters buy Bureaucratics by categories, since one bureaucracy isn't necessarily anything like another. Some possible categorization schemes include:

- by type of bureaucracy (see the accompanying table)
- by culture, region, or nation (Asian Bureaucracies, American Bureaucracies, European Bureaucracies...)
- by individual bureaucracy
- some combination of two or more of these (such as type of bureaucracy and culture/region/nation, so that characters have to purchase, for example, American Business Bureaucracies, Chinese Military Bureaucracies, or African Public Services Bureaucracies)

In any of these schemes a character could typically use Bureaucratics on a bureaucracy he hasn't purchased at a -2 or greater penalty to all rolls.

BUREAUCRATICS BY GENRE

Bureaucratics works the same in all genres, although it's most useful in modern-day or future campaigns where large bureaucratic organizations are commonplace.

CATEGORIZED BUREAUCRATICS

Here's an example of how Bureaucratics might function if subdivided into categories by type of bureaucracy. Each category costs 2 Character Points for a PRE-Based Roll (if a character only wants to know a subcategory, that costs 1 Character Point), +1 to the roll with all categories the character knows for each +2 Character Points. A character can use Bureaucratics on a bureaucracy he hasn't purchased at a -2 or greater penalty to all rolls.

Business Bureaucracies (subcategories are by type of industry):
Financial Bureaucracies
Heavy Industry Bureaucracies
Light Industry Bureaucracies
Software Bureaucracies
Civilian Government Bureaucracies
Foreign Relations Bureaucracies
Judicial System Bureaucracies
Public Services Bureaucracies
Public Utilities Bureaucracies
Regulatory Agency Bureaucracies
School System Bureaucracies
Military Bureaucracies
Air Force Bureaucracies
Army Bureaucracies
Marines Bureaucracies
Military Contracting Bureaucracies
Navy Bureaucracies

Fantasy

While most people associate Bureaucratics with modern government agencies and similar institutions, many Fantasy-era organizations could be equally complex. Ancient Rome had a bureaucracy as Byzantine as any in history (and the word "Byzantine" didn't enter the English language by accident); the size and power of the early Chinese bureaucracy is well-known. Thus, this Skill is perfectly appropriate for Fantasy characters (though, as discussed under *Pulp,* below, it may function more slowly than in the modern day).

If a setting features a hierarchical spirit world where every god and demon bears specific zones of power and fealty, mystics may need Bureaucratics to gain favors from spirits. (The Chinese pantheon is a particularly good example.) A character who belongs to a large mystical order, such as a spell-casting priesthood or a magical university, can use Bureaucratics to negotiate the "office politics" of that organization.

Martial Arts

Most martial arts action heroes have no use for bureaucrats, and with good reason: they prefer to resolve problems the direct way, with their fists. In some campaigns, however, a little knowledge of how to handle bureaucracy can be a great help. For example, in a campaign taking place in period China, Bureaucratics is almost a requirement, especially if the characters have to interact with the Imperial government in any manner. The same is true for games set in feudal Japan. On the other hand, modern-day characters, such as police officers in Cinematic campaigns, tend to ignore local laws and associated bureaucratic entanglements with impunity.

Pulp

When adjudicating the effects of Bureaucratics (and related Skills like Research), the GM should remember that the Pulp era is a slower age with slower communications, one that's much less technologically oriented. Characters can't run a quick search of the county records on a computer — they've got to thumb laboriously through them, using whatever indices or other organizational tools are available. Getting information to or from a distant colonial office or outpost may take days, weeks, or months. In these situations, knowing the right person (Contacts) or flattering the right bureaucrat the right way (which may require other Interaction Skills) can really speed things up... but only so much.

Science Fiction

Depending on the nature and quality of communications technology and the size of interstellar empires, Star Hero characters may suffer from the same sort of "lag" that Pulp Hero characters do when using Bureaucratics. If hyperradio takes a week to send a message to Aldebaran, it doesn't matter how much a character makes his Bureaucratics roll by to get information from the government there — he can't make the process take less than two weeks (one week to send the message, and one to get a reply).

CLIMBING

Type: Agility Skill (roll: 9 + (DEX/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

Climbing allows characters to climb mountains, trees, buildings, and similar objects, typically at a rate of 1" per Phase (or less).

Climbing is primarily a physical Skill. However, it grants the character knowledge of the following subjects: climbing methods and equipment; famous climbing sites and climbers. It also grants the characters the following abilities: knot-tying (though the knot-tying ability granted by Climbing is not as comprehensive as that granted by Contortionist or PS: Knot-Tying); use of ropes to ascend, rappel, and so forth; ability to perceive/find safe climbing routes; ability to judge the weight-holding capacity of a ledge, outcropping, or length of rope.

The Climbing roll is modified by: the type of surface being climbed; the type of equipment being used; the way the equipment is used; the load the character is carrying (if any); and injuries the character has sustained (if any). Climbing is an Everyman Skill for all genres.

CLIMBING SURFACE

Characters usually only have to make Climbing rolls if a surface is steeper than 45 degrees. If a surface has plenty of easy handholds or is otherwise easily climbable, characters may be able to ascend surfaces of up to 60 degrees without Climbing.

The accompanying Climbing Modifiers table lists modifiers to the Climbing roll based on the surface being climbed. All modifiers are cumulative. For example, scaling the outside wall of a glass skyscraper, a 90-degree extremely slippery surface with almost no handholds, would be -12 to the Climbing roll. If it began to rain and the glass became wet, this would increase to -14. (The GM may cap the possible negative modifier at -9 so it doesn't exceed the Extraordinary Skill modifier, but keep in mind that characters usually use equipment to negate a lot of Climbing penalties.)

EQUIPMENT

The *Climbing* Skill assumes a character is "free climbing" — climbing with no equipment (or only with equipment for safety purposes, rather than equipment that actually makes climbing easier). But for most difficult climbs and related activities, climbers use ropes (either regular rope or ropes made especially for climbing), and sometimes advanced equipment such as special climbing shoes or boots (provide increased traction), clawlike devices (such as the *ashiko* and *shuko* used by ninja), pitons (climbing pegs), nylon webbing, crampons (boot spikes), carabiners (climbing rings for sliding rope through), climbing rigs and harnesses, ice screws, belaying devices (used to hold a rope to stop a falling climber), protection devices (metal wedges, chocks, or spring-loaded camming devices the climber can wedge into crevices to obtain additional support), ascending/descending devices, and so forth.

CLIMBING MODIFIERS

Incline Of Surface	Modifier	Example/Notes
45-60 degree incline	-0	Steep hill, average mountainside
61-75 degree incline	-1	Steep mountainside
76-90 degree incline	-2	Tree, building, very steep mountainside
91-105 degree incline	-4	
106-120 degree incline	-6	
121 or greater degree incline	-8	(if climbable at all)
Slipperiness Of Surface		
Slippery surface	-2	Wet rocks
Very slippery surface	-4	Ice-covered rocks
Extremely slippery surface	-6	Glass skyscraper wall
Incredibly slippery surface	-8	Wet or icy glass skyscraper wall
Handholds		
Numerous handholds	+4	Tree with lots of branches, knotted rope
Many handholds	+2	
Average handholds	-0	Tree with a few branches, unknotted rope
Few handholds	-2	
No/Almost no handholds	-4	Flagpole

Equipment	Modifier	Example/Notes
None ("free climbing")	-0	(or worse than Basic equipment)
Basic equipment	+3	Rope, grapnel
Advanced equipment	+6	Rope, carabiners, belaying rings, and so forth
Very Advanced equipment	+12	Advanced climbing rigs, ropes, and so forth
Climbing footwear	+1	Cumulative with other equipment bonuses
Climbing claws	+1	*Ashiko, shuko,* crampons; foot-worn claws (shuko, crampons) are not cumulative with Climbing Footwear bonuses

Use Of Equipment	Modifier
Basic rappeling	-0 for up to 10" descended, -1/+2"
Australian rappeling	-4 for up to 6" descended, -1/+2"

Unlike many Skills, Climbing does not suffer a penalty for using bad equipment — since the rules assume free climbing, *any* equipment can help (or at least not hurt). However, the drawback to using equipment of poor quality is that if a Climbing roll fails, the odds of a fall are much greater (see *Consequences Of Failure,* below).

Rapelling

Most use of Climbing equipment does not require a roll. However, rappeling (also called abseiling) — the rapid descent of a surface by use of a rope — requires not only the use of equipment (a harness, rope, and an anchor point for the rope) but a Skill Roll. Basic rappeling, which involves descending horizontally with the climber's feet toward the climbing surface, requires a Climbing roll at -0. This allows the character to descend at the rate of 4" per Phase; if the character wishes to descend more quickly than that, impose a modifier of -1 to the roll for every additional 2" descended. Australian rappeling, in which the character descends rapidly face-first with a quick reversal at the bottom to land on his feet (used by Australian commandos to exit helicopters quickly, hence the name), requires a roll at -4. A character can descend up to 6" per Phase without penalty while Australian rappeling, -1 per additional 2". Basic and Advanced Equipment modifiers do not apply to Climbing rolls to rappel, since rappeling assumes the use of some equipment; Very Advanced Equipment adds +2 to the roll.

ROPES AND CARABINERS

The equipment most commonly associated with Climbing is rope and carabiners.

Depending on its type and thickness, rope used for climbing typically has a breaking strength of 500-2,500 kg (1,100-5,500 pounds). Of course, characters may find themselves in situations where they have to use weaker rope — rope not made for climbing, rope that's old or worn out, rope that's been frayed or cut partway through. And in some genres they may have access to magical or high-tech ropes that are far sturdier than normal.

Carabiners are metal rings, usually oval- or D-shaped, with a "gate" (a spring-loaded section that opens) on one long side. Depending on type and metal, carabiners typically have a breaking strength of 1,770-5,000 kg (3,890-11,000 pounds), and sometimes more.

If a character puts more weight on a rope or carabiner than it can hold, the GM determines the STR necessary to lift the total amount of weight and uses that STR to apply Normal Damage to the rope (if the rope's rubbing against a sharp ledge or the like, the GM may use the equivalent DCs of Killing Damage instead). Most rope has 2 DEF and 2-4 BODY per 8" of length, but this can vary slightly; a carabiner typically has 4 DEF, 3 BODY. If a rope's or carabiner's BODY drops to 0 as a result of damage, it breaks.

In most cases a character can make an unmodified Climbing roll to gauge the weight-holding capacity of a piece of climbing gear. If he succeeds his estimate is correct within +/-10% (or perfectly accurate if he succeeds by 3 or more); if he fails he's mis-estimated by 10% per point of failure. (The same rule applies to evaluating the weight-holding capacity of ledges, outcroppings, and the like.) This task has a Base Time of a Full Phase.

CLIMBING SPEED

The typical speed for Climbing is 1" per Phase, and that assumes a relatively simple, easily-climbed surface. For more difficult surfaces, including any surface where characters constantly need to use lots of equipment like pitons, the rate drops to 1" per Turn, per Minute, or even slower.

To some extent the limits on Climbing speed depend on the body size of the character — most characters are one hex tall. At the GM's option a taller character, such as one using Growth (or who's bought similar abilities to represent being gigantic all the time) may be able to climb at the rate of his height per Phase (or at least at a rate greater than 1" per Phase). On the other hand, short or small characters (such as dwarves or characters using Shrinking) may climb proportionately more slowly... but a small character may be able to use hand- and footholds that normal-sized and larger characters cannot.

CLIMBING AND COMBAT

While climbing, a character is at half OCV and DCV if he has any freedom of movement (for example, while climbing a tree which he can hold onto with his legs, leaving his arms/upper body free to move), and 0 OCV and DCV if he has no freedom of movement (for example, while scaling a sheer cliff barehanded).

A character who fights while involved in an easy climb (such as up a ladder) suffers a -1 DCV. Character involved in more strenuous climbs suffer the higher OCVand DCV penalties described above. Additionally, a character involved in a strenuous climb must subtract 2 DCs from all attacks he makes (both HTH and Ranged), and may not be able to use some Combat or Martial Maneuvers (for example, it's hard to kick when a character needs to keep both his feet firmly planted on a ledge, and hard to punch if he's holding onto a rope).

If a character is involved in a fight and is knocked off a ledge due to Knockback or the like, with the GM's permission he may make a DEX Roll (or Climbing roll) to grab onto the ledge, a rope, or something else so that he's hanging on and doesn't fall. (The GM might not allow this if, for example, the character takes so much Knockback that he'd have no real chance to grab onto the ledge.) He may then, as a Full Phase Action, make a STR Roll or Climbing roll (GM's choice) to pull himself back up on top of the ledge (but of course, his opponent may not let him try to climb back up unhindered...). While holding on for dear life and pulling himself back up on top of the ledge, a character is at ½ OCV, ½ DCV.

POWERS AND CLIMBING

Many Movement Powers, such as Flight and Teleportation, render Climbing unnecessary. Similarly, Clinging allows characters to ascend sheer walls without having to worry about handholds or ropes. Characters may buy Clinging with *Requires A Climbing Roll* (-½) and *Cannot Resist Knockback* (-¼) to represent a "super-Skill" at climbing. Clinging as a super-Skill is also how characters can buy the ability to climb at a faster rate than 1" per Phase.

CONSEQUENCES OF FAILURE

In most cases, a failed Climbing roll indicates the climber has reached an impasse — due to lack of handholds or some other reason, he cannot climb any higher. (Standard "repeat attempt" rules apply if the character wants to try to find a way around the impasse or another route he can take.) If it's possible to do so, he may make a Climbing roll at +2 to descend the surface, and then another Climbing roll to find another route up the surface. The GM may impose negative modifiers on this roll if the alternate route would be particularly hard to find, or may rule that it cannot be made at all because there is no other route.

However, in some situations, particularly those where the character fails the roll badly (typically -4 or more in most situations, -3 or more in situations with especially difficult surfaces or where the character uses poor-quality equipment, but GM's discretion always prevails), he falls. If the character is using climbing equipment, that equipment probably prevents him from falling very far, and thus from taking any damage. However, the GM may require an additional, unmodified, Climbing roll to determine whether the character set up his



equipment correctly. If this roll fails, the equipment breaks, separates from the surface, comes apart, or otherwise doesn't work properly, and the character falls. In the event of a fall, a character may use Breakfall to stop the fall partway down (if this is possible, in the GM's discretion) or to reduce the damage taken from the fall. See *Breakfall* (page 87) and pages 434-37 of *The HERO System 5th Edition, Revised* for more information on falling damage and how to prevent it.

BASE TIMES

Characters can climb most surfaces at the rate of 1" per Phase as a Full Phase Action (or, at the GM's discretion, ½" as a Half Phase Action). The GM may alter this rate of movement if he prefers, or perhaps provide an inch or two "bonus" in a Phase when a character makes his roll by half or more (and perhaps even a little faster for a Critical Success).

Related to the Base Time is the issue of how frequently characters should have to make Climbing rolls. For short climbs (say, 10" or less) under relatively easy conditions, a single roll is probably enough. For feats like scaling the Matterhorn, one roll per hour or per day may be plenty to maintain the dramatic tension. For climbs between those two extremes, the GM should set a time parameter based on common sense and dramatic sense, perhaps with the number of rolls in mind. For example, if the GM thinks that a climb should involve five Climbing rolls, he can divide the climb into five equal time increments and call for a roll in each one.

SUBDIVIDING CLIMBING

Climbing is already a fairly limited Skill, so in most campaigns the GM won't need to subdivide. If characters do a lot of climbing, the GM might want to split it into categories based on the surface climbed (Raw Stone, Worked Stone, Worked Metal, Glass, and so on). In that case, a character can still use Climbing on a surface he hasn't bought as a category, but at a -2 or greater penalty to all rolls.

CLIMBING BY GENRE

Climbing works the same in all genres, but the type of equipment available varies.

Cyberpunk/Near Future

In the near future, all types of equipment listed above are available, and even more advanced equipment may make climbing even easier and safer.

Dark Champions

All types of Climbing equipment are available in this genre.

Fantasy

In this genre, only Basic climbing equipment is available — ropes, grapnels, and the like. Advanced and Very Advanced equipment, such as climbing harnesses, is not available. However, in Oriental Fantasy games, or games which take place in especially advanced Fantasy societies, additional tools such as climbing claws or collapsible ladders may be used; see *The Ultimate Martial Artist,* pages 97-89, 209, 219.

In many Fantasy settings, magic may turn climbing into an easy task. Enchanted ropes and Spells of Spider-Walking make ascending even the sheerest rock face simple.

Martial Arts

All types of equipment are available if the game takes place in a modern-day setting; in Fantasy/historical settings, refer to *Fantasy,* above.

Pulp

Advanced climbing equipment is available in this genre, but not Very Advanced equipment.

Science Fiction

In this genre, climbing equipment may be rendered unnecessary (except for recreational purposes) by the advent of personal anti-gravity packs and similar devices. Climbing equipment as advanced as Cyberpunk/Near Future remains available for characters who want it, though.

Superheroes

All types of equipment are available, and super-technology may even create better types of equipment than are available in the real world (such as "cling-grips" that make climbing skyscraper walls easy).

Super-strong characters ("bricks") often climb cliffs, walls, and the like by smashing handholds into the surface. You can represent this in several ways. First, the GM can have the brick roll his STR dice for each Phase of climbing, and if he does BODY damage to the surface, he's made handholds and can keep climbing (this limits the brick to a climbing speed of about one body length per Phase, at most; see above). Second, the character can buy Climbing with the Limitation *Side Effects* (always causes relatively minor damage to the environment [the surface being climbed]; -0). Third, the character could buy Clinging with the same Limitation.

Western/Victorian

In these genres, only Basic climbing equipment is available — ropes, grapnels, and the like. Advanced and Very Advanced equipment, such as climbing harnesses, is not available.

COMBAT DRIVING

Type: Agility Skill (roll: 9 + (DEX/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

Characters with this Agility Skill can drive and control ground or surface water vehicles in difficult situations. It applies to all vehicles that operate in two dimensions, from carts and chariots, to automobiles, to surface boats and ships.

A character with Combat Driving knows generally how to operate any of the vehicles to which Combat Driving applies — how to turn them on (if necessary), the controls used to steer them, how to turn and maneuver, and so forth. He also knows about the different types of vehicles he can operate and can evaluate their relative capabilities in general terms. For example, he knows that Sportscar X is faster than Sportscar Y, but Sportscar Y handles better or has some other feature that might compensate for its relative slowness in certain conditions. (However, the character isn't as good at comparing vehicles as a character with Analyze Vehicles or a specialized Knowledge Skill like KS: Automobiles.) He can also perform very basic maintenance on the vehicles he can operate, though nothing requiring a roll with the *Electronics* or *Mechanics* Skills.

A character with Combat Driving knows how to read a map, but would have difficulty determining his location in unfamiliar territory or after becoming lost (that requires Navigation (Land)).

See *The Ultimate Vehicle* for extensive rules about operating and using vehicles in the *HERO System.*

USING COMBAT DRIVING

To use Combat Driving, the character must know how to operate the vehicle (see *Transport Familiarity,* page 342). Characters with this Skill automatically have Familiarity with one 1-point class of vehicles that operate in two dimensions. (Typically this would be the class of vehicles the character first learned to drive in, meaning Small Motorized Ground Vehicles, Small Wind-Powered Boats, or Small Motorized Boats, but it depends on the character, the setting, and the circumstances.) Characters who want to know how to operate more than one class of vehicle should purchase Transport Familiarity. (Unless the GM permits otherwise, a character cannot "upgrade" his free 1-point TF to a 2-point TF category by paying just 1 Character Point; he has to pay the full 2 Character Point cost.) At the GM's option, a character who wants to use his Combat Driving with a type of vehicle for which he has no TF can do so, but at a -4 penalty on all rolls.

Characters use Combat Driving to operate ground and water surface vehicles during crisis conditions or stressful situations. Primarily this means combat, but it also includes making Control Rolls (see below) if there's a possibility of losing control of the vehicle. They don't have to make Combat Driving rolls to operate a vehicle normally under ordinary conditions unless something unusual happens — someone attacks the vehicle,

road conditions suddenly worsen, an obstacle suddenly presents itself, or the like.

In battle or other crisis conditions, Combat Driving has three main uses:

■ it allows the character to operate the vehicle at its full DCV when moving at Combat Movement velocities (vehicles operated by characters without Combat Driving are automatically at ½ DCV). This doesn't require a roll; it's an automatic benefit of having Combat Driving. Negative modifiers, such as the vehicle's Size or moving at Noncombat Velocity, still apply.

■ it allows the character to make Control Rolls to keep his vehicle under control whenever there's a chance he might lose control (such as if the vehicle suffers damage or he tries to avoid an obstacle). See *The Ultimate Vehicle,* pages 169-71, for complete details on and modifiers for Control Rolls.

■ it allows the character to perform Vehicle Maneuvers in combat. See *The Ultimate Vehicle,* pages 178-80, for complete details on Vehicle Maneuvers.

Chapter Eight of *The Ultimate Vehicle* has extensive rules for vehicular combat, including Actions, crews, Hit Location tables, and more. It's an invaluable resource for characters who want to use Combat Driving extensively.

CATEGORIZED COMBAT DRIVING

Each of these categories costs 2 Character Points for a DEX-Based Roll (if a character only wants to know a subcategory, that costs 1 Character Point), +1 to the roll with all categories the character knows for each +2 Character Points.

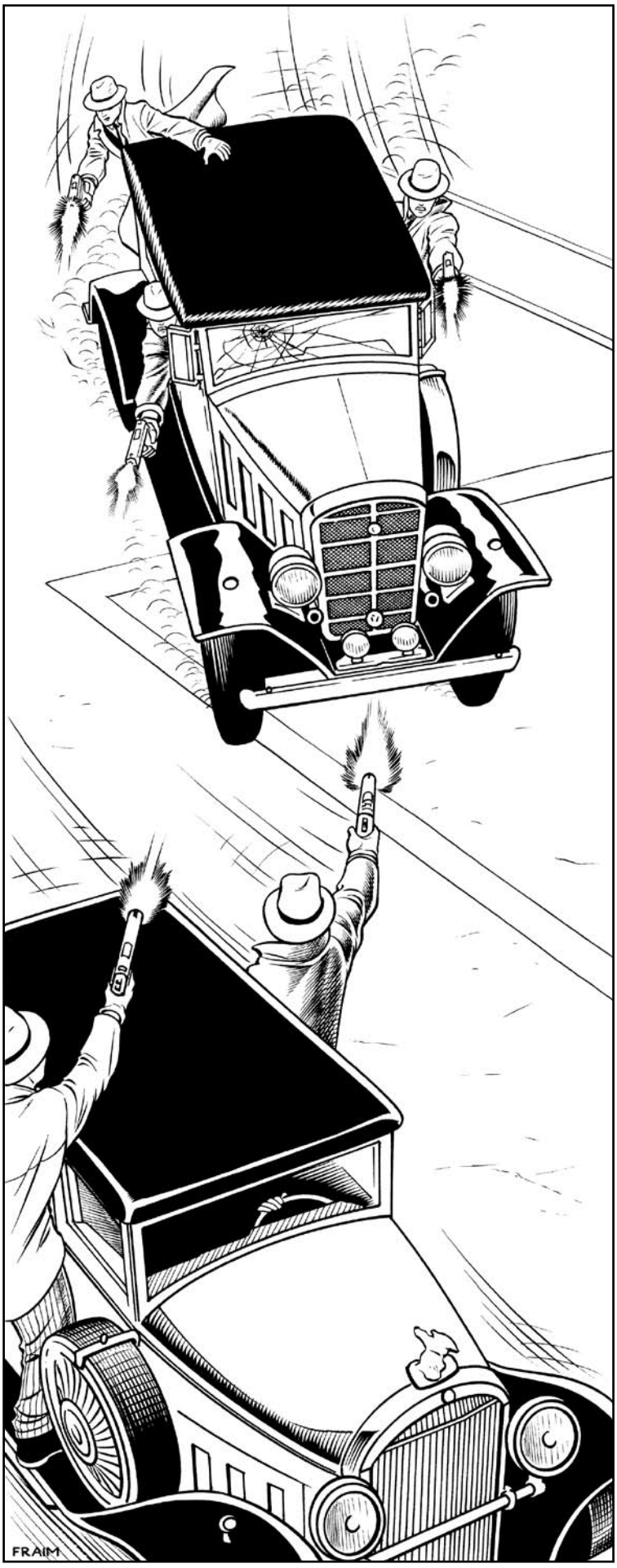
Muscle-Powered Ground Vehicles
Carts & Carriages
Chariots
One-Wheeled Muscle-Powered Ground Vehicles
Two-Wheeled Muscle-Powered Ground Vehicles

Common Motorized Ground Vehicles
Small Motorized Ground Vehicles
Large Motorized Ground Vehicles

Uncommon Motorized Ground Vehicles
Construction & Agricultural Vehicles
Railed Vehicles
Tracked Military Vehicles
Two-Wheeled Motorized Ground Vehicles
Wheeled Military Vehicles

Cold-Weather Vehicles
Bobsleds
Sleds
Snowmobiles

Water Surface Vehicles
Small Military Ships
Large Military Ships
Small Motorized Boats
Large Motorized Boats
Rafts
Small Rowed Boats
Large Rowed Boats
Small Wind-Powered Boats
Large Wind-Powered Boats



EQUIPMENT

Obviously Combat Driving requires equipment — a vehicle to drive. Beyond that, it's a purely personal Skill; it rarely benefits from any equipment that's not installed as part of the vehicle itself. For example, some vehicles have special suspensions, tires, or navigation computers that make Combat Driving rolls easier. These are bought as bonuses to Combat Driving that are limited to specific situations. For example, a car that handles really well at high speeds might have +4 to Combat Driving, Only For Making Handling Rolls At High Speeds (-1) (total cost: 4 points). (If the bonuses are just to counteract a specific type of penalty to Control Rolls, Vehicles should buy that as a form of Penalty Skill Level, as discussed in *The Ultimate Vehicle,* page 19.)

It's not unheard of for a vehicle's operator to leave the driving to an autopilot or onboard computer while he does something else (such as operate a weapons system). A Vehicle with one of these Skills can drive itself while the operator takes another action. It can also make a Skill Roll as a Complementary Roll to assist the operator with his driving; this requires a Half Phase Action by the Vehicle.

CONSEQUENCES OF FAILURE

As discussed in greater detail on pages 169-71 of *The Ultimate Vehicle,* a failed Combat Driving roll usually means the character has lost control of his vehicle. This can lead to skidding, crashes, and other unpleasantness.

BASE TIMES

Most uses of Combat Driving are Zero Phase Actions (or even Actions which take no time). In a few instances they may take longer, as discussed in *The Ultimate Vehicle.*

SUBDIVIDING COMBAT DRIVING

As noted in the *HERO System 5th Edition, Revised,* Combat Driving applies to all vehicles that move in two dimensions, such as ground vehicles and surface ships. In vehicle-oriented campaigns, GMs may want to divide Combat Driving into multiple Agility Skills based on the type of vehicle involved: Combat Driving (cars, trucks, and the like); Combat Sailing (all watercraft); Combat Teamstering (most towed ground or water surface vehicles); Combat Sledding (all winter ground vehicles); and so forth.

The GM could get even more detailed if desired, requiring characters to buy Combat Driving by category of vehicles defined in the Transport Familiarity Table. See the accompanying table for an example.

COMBAT DRIVING BY GENRE

Combat Driving generally works the same in all genres. The issue is not how the Skill functions, but the types of vehicles available for characters to drive.

Cyberpunk/Near Future

In *Cyber Hero* campaigns, animal-towed vehicles like coaches might be so rare (or even nonexistent) that GMs remove them from the ambit of Combat Driving. A character who wants to learn how to operate those vehicles in crisis conditions would have to buy Combat Teamstering as a separate Agility Skill (or possibly PS: Drive Animal-Towed Vehicles, to make it less expensive).

Fantasy

While Fantasy lacks cars for characters to drive, you can recast this Skill in several different ways to make it applicable to the genre.

The first is *Teamster,* the ability to drive wagons, coaches, stagecoaches, and like vehicles (and manage the teams of animals that pull them) during crisis conditions. Since this rarely requires any sort of combat application, the GM may just let characters buy the appropriate TFs and use DEX Rolls to handle high-speed chases if they ever occur.

The second is *Charioteering,* the ability to steer a chariot and handle the animals pulling it in combat. An important Skill for many ancient cultures (such as the Romans and the Irish), it could easily become a part of many Fantasy worlds.

The third is *Combat Sailing.* See *The Ultimate Vehicle,* page 55, for more information on this Skill.

The fourth is *Sledding,* the ability to drive sleds, sleighs, and similar cold-weather vehicles in combat conditions.

Science Fiction

The rule suggested above for Cyberpunk/Near Future games might also apply in Science Fiction, where entire campaigns can take place in space without characters even having the chance to smell a horse or sled dog, much less drive a pulled vehicle. On the other hand, some Science Fiction settings may involve lower technology (at least in some areas) or a lot of planetside adventures where draft animals (albeit weird alien ones) are a common fact of life.

Western/Victorian

Aside from its uses with wagons and stagecoaches (discussed above under *Fantasy*), Combat Driving becomes applicable to drive actual cars late in the Victorian period.

COMBAT PILOTING

Type: Agility Skill (roll: 9 + (DEX/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

Characters with this Agility Skill can pilot and control vehicles that operate in three dimensions in difficult situations. It applies to all vehicles that operate in three dimensions, from airplanes and helicopters, to submarines, to spacecraft.

A character with Combat Piloting knows generally how to operate any of the vehicles to which Combat Piloting applies — how to turn them on (if necessary), the controls used to steer and them, how to take off and land, how to turn and maneuver, and so forth. He also knows about the different types of vehicles he can operate and can evaluate their relative capabilities in general terms. For example, he knows that Jet X is faster than Jet Y, but Jet Y handles better or has some other feature that might compensate for its relative slowness in certain conditions. (However, the character isn't as good at comparing vehicles as a character with Analyze Vehicles or a specialized Knowledge Skill like KS: Aircraft.) He can also perform very basic maintenance on the vehicles he can operate, though nothing requiring a roll with the *Electronics* or *Mechanics* Skills.

A character with Combat Piloting knows how to read a map, but would have difficulty determining his location in unfamiliar territory or after becoming lost (that requires Navigation (Air) or the like).

See *The Ultimate Vehicle* for extensive rules about operating and using vehicles in the *HERO System.*

USING COMBAT PILOTING

To use Combat Piloting, the character must know how to operate the vehicle (see *Transport Familiarity,* page 342). Characters with this Skill automatically have Familiarity with one 1-point class of vehicles that operate in three dimensions. (Typically this would be the class of vehicles the character first learned to pilot in, meaning Small Planes, Helicopters, or Personal-Use Spacecraft, but it depends on the character, the setting, and the circumstances.) Characters who want to know how to operate more than one class of vehicle should purchase Transport Familiarity. (Unless the GM permits otherwise, a character cannot "upgrade" his free 1-point TF to a 2-point TF category by paying just 1 Character Point; he has to pay the full 2 Character Point cost.) At the GM's option, a character who wants to use his Combat Piloting with a type of vehicle for which he has no TF can do so, but at a -4 penalty on every roll.

Characters use Combat Piloting to operate vehicles during crisis conditions or stressful situations. Primarily this means combat, but it can also include landing on or taking off from rough ground, or flying during storms or other severe weather. They don't have to make Combat Piloting rolls to operate a vehicle normally under ordinary conditions (including a standard landing at an airport) unless something unusual happens — someone attacks the vehicle, weather conditions suddenly worsen, an obstacle uexpectedly arises, or the like.

In battle or other crisis conditions, Combat Piloting has three main uses:

■ it allows a character to operate the vehicle at its full DCV when moving at Combat Movement velocities (vehicles operated by characters without Combat Piloting are automatically at ½ DCV). This doesn't require a roll; it's an automatic benefit of having Combat Piloting. Negative modifiers, such as the vehicle's Size or moving at Noncombat Velocity, still apply.

■ it allows a character to make Control Rolls to keep his vehicle under control whenever there's a chance he might lose control (such as if the vehicle suffers damage or he tries to avoid an obstacle). See *The Ultimate Vehicle,* pages 169-71, for complete details on and modifiers for Control Rolls.

■ it allows a character to perform Vehicle Maneuvers in combat. See *The Ultimate Vehicle,* pages 178-80, for complete details on Vehicle Maneuvers.

Chapter Eight of *The Ultimate Vehicle* has extensive rules for vehicular combat, including Actions, crews, Hit Location tables, and more. It's an invaluable resource for characters who want to use Combat Piloting extensively.

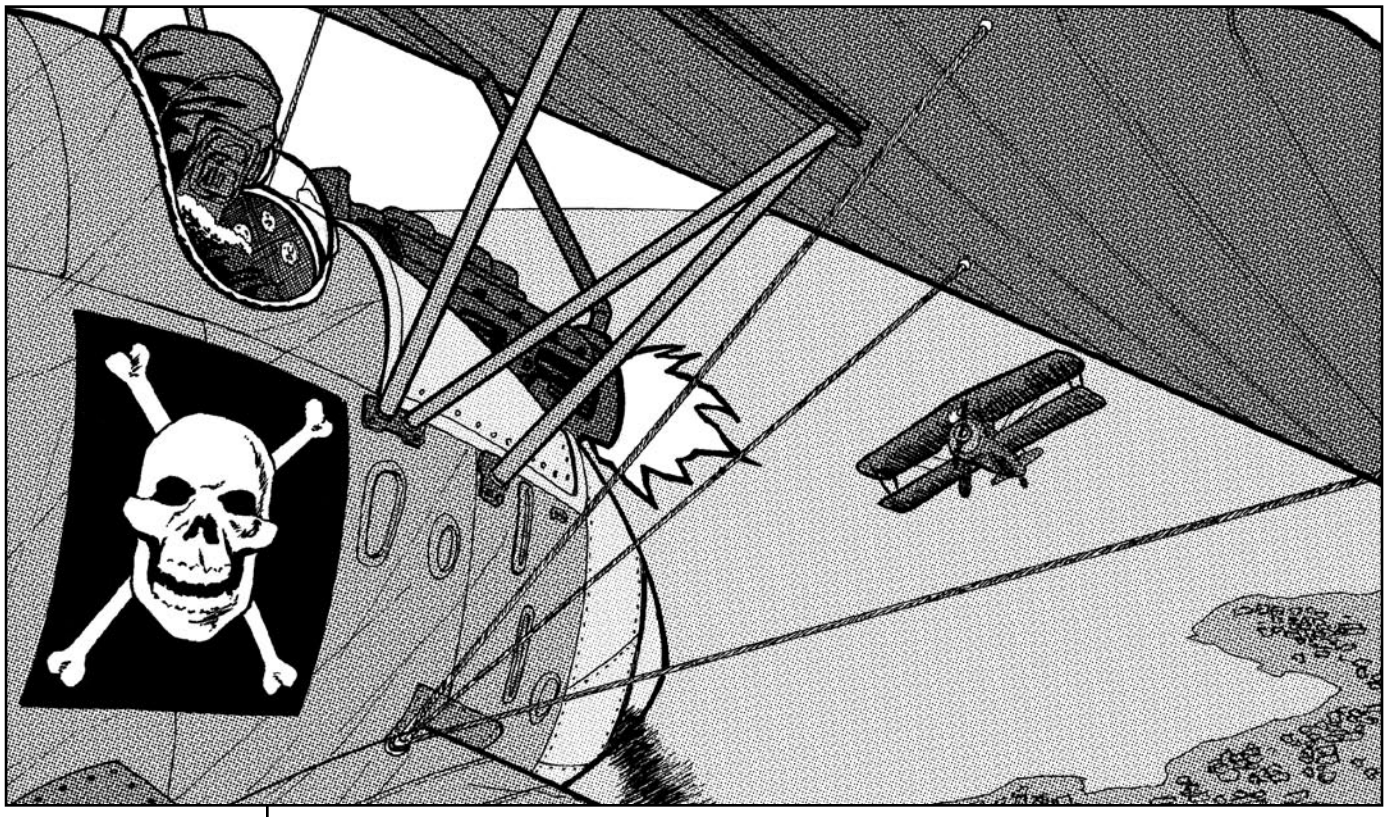
EQUIPMENT

Obviously Combat Piloting requires equipment — a vehicle to pilot. Beyond that, it's a purely personal Skill; it rarely benefits from any equipment that's not installed as part of the vehicle itself. For example, some vehicles have special control surfaces, engine modifications, or autopilots that make Combat Piloting rolls easier. These are bought as bonuses to Combat Piloting that are limited to specific situations. For example, a plane that handles really well at high speeds might have +4 to Combat Piloting, Only For Making Handling Rolls At High Speeds (-1) (total cost: 4 points). (If the bonuses are just to counteract a specific type of penalty to Control Rolls, Vehicles should buy that as a form of Penalty Skill Level, as discussed in *The Ultimate Vehicle,* page 19.)

It's not unheard of for a vehicle's operator to leave the piloting to an autopilot or onboard computer while he does something else (such as operate a weapons system). A Vehicle with one of these Skills can pilot itself while the operator takes another action. It can also make a Skill Roll as a Complementary Roll to assist the operator with his Piloting; this requires a Half Phase Action by the Vehicle.

CONSEQUENCES OF FAILURE

As discussed in greater detail on pages 169-71 of *The Ultimate Vehicle,* a failed Combat Piloting roll usually means the character has lost control of his vehicle. This can lead to stalling, crashes, and other unpleasantness.



BASE TIMES

Most uses of Combat Piloting are Zero Phase Actions (or even Actions which take no time). In a few instances they may take longer, as discussed in *The Ultimate Vehicle.*

SUBDIVIDING COMBAT PILOTING

As noted in the *HERO System 5th Edition, Revised,* Combat Piloting applies to all vehicles that move in three dimensions, such as aircraft, spacecraft, and submarines. In vehicle-oriented campaigns, GMs may want to divide Combat Piloting into multiple Agility Skills based on the type of vehicle involved: Combat Piloting (airplanes); Combat Helicoptering (helicopters); Combat Submarining (submarines); Combat Spacecraft (space- and starships); and so forth.

The GM could get even more detailed if desired, requiring characters to buy Combat Piloting by category of vehicles defined in the Transport Familiarity Table. See the accompanying table for an example.

COMBAT PILOTING BY GENRE

Combat Piloting generally works the same in all genres, though it's usually only available in Modern and Future cultures (ones advanced enough to have aircraft and submarines, if not spacecraft). The issue is not how the Skill functions, but the types of vehicles available for characters to drive.

Fantasy

Some Fantasy settings feature flying ships, flying carpets, magical wind-riding ships, and other aerial vehicles. In those games, characters would use Combat Piloting to operate and steer such vessels. Otherwise this Skill has no application in Fantasy games.

CATEGORIZED COMBAT PILOTING

Each of these categories costs 2 Character Points for a DEX-Based Roll (if a character only wants to know a subcategory, that costs 1 Character Point), +1 to the roll with all categories the character knows for each +2 Character Points.

Air Vehicles
Balloons & Zeppelins
Small Planes
Large Planes
Combat Aircraft
Helicopters

Subsurface Water Vehicles
Submarines

Science Fiction & Space Vehicles
Early Spacecraft
Spaceplanes
Grav Vehicles/Hovercraft
Personal-Use Spacecraft
Commercial Spacecraft & Space Yachts
Industrial & Exploratory Spacecraft
Military Spacecraft
Mobile Space Stations

COMBAT SKILL LEVELS

Type: Combat Skill (roll: N/A)
Cost: 1-8 Character Points per Level (see text)

Once a character knows how to use an attack, he can improve his ability to use it by buying *Combat Skill Levels* — bonuses characters purchase for particular attacks. There are seven types of Combat Skill Levels (or eight, if you include Overall Skill Levels). Each is described below. They're one of the most flexible and helpful elements in the *HERO System,* since they allow a player to customize what his character's best at in battle. That means a better-defined character more precisely embodying the player's vision of his PC.

Due to their flexibility, "CSLs" require some detailed rules governing their purchase and use to preserve game balance. The rules on pages 53-55 of *The HERO System 5th Edition, Revised* discuss and describe Combat Skill Levels generally. This section expands on that discussion and offers some new rules for CSLs. As always, these rules are subject to the GM's approval; each individual GM can choose to use (or not use) them however, and to whatever degree, he wants. If you prefer to use the standard 2-, 3-, 5-, and 8-point Levels system from the core rulebook instead of the more detailed system presented here, the accompanying sidebar has some guidelines for how to apply these rules.

Buying Combat Skill Levels

Gamemasters should examine the Combat Skill Levels a character purchases carefully to make sure they're not abusive or likely to unbalance the game.

In particular, GMs should forbid characters to buy "restricted" types of CSLs when the restrictions don't really apply to them. For example, look at the following types of 3-point CSLs:

■ +1 OCV *or* +1 DCV *or* increase damage with all the Martial Maneuvers in a single Martial Arts style (regardless of the number of Maneuvers) performed barehanded

■ +1 OCV *or* +1 DCV *or* increase damage with Firearms with Shoot (a type of Strike)

■ +1 OCV *or* +1 DCV *or* increase damage with HTH Combat Weapons with the Combat Maneuver *Strike*

The restrictions on these CSLs — only performed barehanded, only with Shoot, and only with the Combat Maneuver *Strike* — presuppose the character could use the Level for *something else* during the normal course of play. For example, he might have Weapon Elements that allow him to use his Martial Maneuvers with weapons (something he frequently does), Ranged Martial Arts maneuvers that work with Firearms, or other Maneuvers he can use with HTH Combat Weapons, respectively. If that's *not* the case — if the only thing the character's likely to do with his Martial Maneuvers is attack barehanded, if he almost always uses Shoot with his Firearms, or if he rarely does anything but use Strike with HTH weapons — then the GM should require him to buy 4-point CSLs instead. The "restriction" in this case doesn't restrict the character in any meaningful way, so the GM shouldn't allow him to buy the CSLs for the cheaper cost.

Combat Skill Levels bought as Powers (*i.e.,* which have Advantages and/or Limitations) cannot be bought as a slot, or part of a slot, in a Power Framework unless the GM specifically permits it. Under the standard *HERO System* rules, only 5-point and more expensive CSLs can have Limitations (and, with the GM's permission, Advantages). Alternately, the GM can allow any type of CSL to have Advantages or Limitations (see below for more information).

COMBAT SKILL LEVELS WITH MIXED TYPES OF ATTACKS

A character might want to buy a 3-point or more expensive Combat Skill Level for use with multiple attacks, powers, and/or weapons, some of which are HTH and some of which are Ranged. This is allowed, provided the GM considers all the attacks, powers, and/or weapons sufficiently closely related.

ADVANTAGES

Characters may not buy Advantages for Combat Skill Levels without the GM's permission.

LIMITATIONS

Ordinarily, characters may only apply Limitations to 5-point or more expensive Combat Skill Levels. This rule is intended to maintain game balance by keeping characters from acquiring enormous OCV bonuses for very few points. However, it may result in some illogical conclusions or in-equities. In some cases, a character could even end up paying more points for a Limited 5-point CSL than he would have if he'd simply bought the same number of less expensive CSLs without Limitations. That's something to avoid; it tends to make gamers focus on "gamethink" rather than "roleplaying." To prevent this problem from occurring, GMs can consider the following solutions, and implement them if appropriate.

First, the GM can allow characters to put Limitations on 3- and 2-point CSLs, if doing so is appropriate for the character's special effects, complies with common sense and dramatic sense, and won't unbalance the game. This solution works well when the player requesting an exemption from the normal rules is responsible enough not to abuse the privilege, and the cost disparity between regular CSLs and Limited 5-point CSLs is enough to discourage him from creating an interesting, fun ability for his character.

Second, the GM can allow characters to put Limitations on 3- and 2-point CSLs, but only for a -0 Limitation value. That way the character doesn't get an unbalancing point break on the cost of the ability, but still saves points compared to a Limited 5-point CSL. This allows characters to bring cool abilities and gadgets into play without automatically creating game balance problems.

STANDARD COMBAT SKILL LEVELS

The rules presented here deal with a detailed, complex subject in a detailed, complex way that may not be suitable for every campaign. If you prefer to use just the standard 2-, 3-, 5-, and 8-point Combat Skill Levels, the following guidelines generally apply if you want to adapt *The Ultimate Skill*'s rules to them.

Information and rules about 1- and 2-point CSLs typically applies to standard 2-point CSLs.

Information and rules about 3- and 4-point CSLs typically applies to standard 3-point CSLs. Alternately, the GM may want to treat some 4-point CSLs as 5-point CSLs with a -¼ Limitation.

Information and rules about 5- and 6-point CSLs typically applies to standard 5-point CSLs. Alternately, the GM may want to treat some 6-point CSLs as 8-point CSLs with a -¼ Limitation.

COMBAT SKILL LEVEL TABLE

Cost	Application
1	+1 OCV with a single, specific type of attack or weapon used with a single, specific manner of attack
2	One single, specific type of attack or weapon used with any manner of attack (or a defined group of manners of attack)
	A closely-defined category of types of attacks or weapons used with a single, specific manner of attack.
3	+1 OCV *or* +1 DCV *or* increase damage with a closely-defined category of types of attacks or weapons used with any manner of attack (or a defined group of manners of attack)
	+1 OCV *or* +1 DCV *or* increase damage with a broadly-defined category of types of attacks or weapons used with a single, specific manner of attack
	+1 OCV with a very broad category of attacks or abilities in a restricted situation
	+1 DCV versus a very broad category of attacks or abilities in a restricted situation
	+1 OECV *or* +1 DECV *or* increase damage with a closely-defined category of types of Mental attacks used with any manner of attack (or a defined group of manners of attack)
4	+1 OCV *or* +1 DCV *or* increase damage with a broadly-defined category of types of attacks or weapons used with any manner of attack (or a defined group of manners of attack)
	+1 DCV versus HTH attacks *or* Ranged attacks
	+1 DECV versus all Mental Powers and attacks
5	+1 OCV *or* +1 DCV *or* increase damage with all HTH Combat attacks, used or performed in any way (but not including Mental Powers or Mental Combat attacks)
	+1 OCV *or* +1 DCV *or* increase damage with all Ranged Combat attacks, used or performed in any way (but not including Mental Powers or Mental Combat attacks)
	+1 OCV *or* +1 DCV *or* +1 OECV *or* +1 DECV *or* increase damage with all Mental Powers and Mental Combat attacks (both HTH and Ranged), used or performed in any way
	+1 DCV versus all attacks, HTH or Ranged (but not Mental)
6	+1 OCV *or* +1 DCV *or* +1 OECV *or* +1 DECV *or* increase damage with any two of these categories: HTH Combat attacks; Ranged Combat attacks; Mental Powers and attacks
8	+1 with All Combat

Combat Skill Levels bought with Limitations are a form of the *Skills* Power, making them a Special Power and a Constant Power (the GM may also consider them an Attack Power). They can only increase the user's OCV unless the GM gives special permission otherwise.

Example: *Harbinger wants to create a rifle that has gyroscopic balancers and a laser-spotting scope so he can hit almost anything at any range. He buys the attack as an RKA on an Obvious Accessible Focus. Harbinger then adds +4 OCV to the gun. Since the smallest CSL a character can Limit is the 5-point Level, the +4 OCV costs him 20 points (reduced to 10 by the OAF Limitation). Whenever Harbinger uses the gun, he receives a +4 to his OCV.*

Characters cannot buy any type of Combat Skill Levels "as powers" without putting Limitations on them.

Negative Combat Skill Levels

Certain powers or abilities, such as some curses in Fantasy games, involve making a character less capable in combat — in short, they apply negative CSLs to him. At the GM's discretion, a character may buy *Negative Combat Skill Levels* as a Power. Each -1 OCV or -1 DCV imposed on the target costs 5 Character Points; the character must choose what the Negative CSLs apply to when he buys them, and cannot change them thereafter. A character can, if desired, purchase a single power that imposes Negative CSLs on both OCV and DCV (for example, "-2 OCV and -3 DCV" for 25 Character Points).

The OCV reduction imposed by Negative Combat Skill Levels applies to all of the victim's attacks, regardless of their type or who he makes them against. The DCV reduction imposed by Negative Combat Skill Levels applies to any attack made against the victim, regardless of who makes it. In short, Negative CSLs don't just help the character who uses them as an attack; they help everyone opposed to the victim.

The *Negative Combat Skill Levels* Power is No Range, Constant, and costs END. Using it requires an Attack Roll and an Attack Action. Like Suppress, a character has to "maintain" them by spending END every Phase to keep them in effect; if he stops paying END, the Negative CSLs immediately cease to effect the target. (The GM should apply the rules for 0 END Suppresses to 0 END NCSLs.)

Characters may not buy Advantages such as *AVLD, NND,* or *Penetrating* for Negative Combat Skill Levels.

The defense against Negative Combat Skill Levels is Power Defense. Each point of Power Defense negates one Negative CSL, Negative Penalty Skill Level, or Negative Skill Level.

Allocating Combat Skill Levels

Combat Skill Levels (CSLs) have several potential uses (see below). However, a character can only use a given CSL for one thing at a time.

A character allocates his Combat Skill Levels as a Zero Phase Action. Likewise, he can change the allocation of previously-allocated CSLs as a Zero Phase Action. However, unless the GM permits otherwise, a character can only allocate or change the allocation of his CSLs once per Phase.

After a character attacks, his Combat Skill Levels remain allocated as they are until he has another Phase and decides to change them as a Zero Phase Action, or he Aborts to a defensive Action. Aborting allows him to assign any applicable CSLs to DCV, if he wants to.

Example: *Pierre (DEX 20, SPD 4, 3 CSLs with Fencing) and Severin (DEX 18, SPD 4, 2 CSLs with Fencing) are squaring off to duel with their swords. Combat begins in Segment 12 as usual, when both characters have Phases. Since Pierre has the higher DEX, his Phase occurs first in the Segment, and he can apply his CSLs as a Zero Phase Action at that time (or after performing a Half Phase Action). Since Severin's Phase has not yet occurred, he cannot assign his CSLs yet, and gets no benefit from them against Pierre's first attack. He could, however, Abort his Phase, and in doing so assign his Fencing CSLs to DCV.*

If characters are in a situation where they expect a fight to occur, or think they're about to be attacked, they can, with the GM's permission, allocate their Combat Skill Levels even though combat hasn't begun and no one has had a Phase yet. But as noted below, CSLs applicable to DCV aren't Persistent and can't be assigned to increase DCV "at all times"; characters can only assign CSLs in advance of combat if they have a reasonable expectation of combat or danger, as judged by the GM.

A character can use one or more Overall Skill Levels (page 301) as Combat Skill Levels. If so, he cannot apply any Overall Levels used as CSLs to anything else that Phase.

Example: *Renegade has four 8-point CSLs with All Combat. When his turn comes to act in Phase 8 (he is DEX 25), he assigns 2 Levels to OCV and 2 to DCV. His CSLs stay that way until he acts in Phase 10 (again, on DEX 25), at which point he can decide to leave them as they are or rearrange them.*

Example: *Pulsar has a 5-point CSL with Ranged Combat. On his Phase in Segment 4, he assigns it to OCV so he has a greater chance of hitting his target with his Energy Blast power. In Segment 5, a policeman shoots at him with a gun. Because Pulsar doesn't have a Phase in Segment 5, his CSL remains assigned to OCV. He can't assign his CSL to DCV unless he decides to Abort his Phase in Segment 6, in which case he could apply the CSL to increase his DCV against Ranged attacks.*

Example: *Space Ranger Trelayne Alpha-7 has four CSLs: one 8-point CSL with All Combat, one 5-point CSL with Ranged Combat, one 2-point CSL with Laser Pistols (using the Shoot maneuver); and one 10-point Overall Skill Level. In his Phase in Segment 4, he wants to fire his laser pistol at a Xenovore who's attacking him. His 2-point CSL applies to improve his OCV; that's all he can do with it. He decides to assign the 8-point CSL to DCV and the 5-point CSL and 10-point Overall Level to OCV. Thus, he has +3 OCV, +1 DCV due to the assignment of his CSLs.*

In Segment 6, the Xenovore shoots its gauss rifle and injures Trelayne badly. Realizing he can't risk taking any more damage, on his Phase in Segment 8 the intrepid Space Ranger keeps his 2-point CSL in OCV (again, because that's all it can do), but allocates all the other CSLs to DCV. He now has +1 OCV, +3 DCV against the Xenovore.

Fortunately, the Xenovore's attack in Segment 9 misses. In Segment 12, Trelayne goes first. Hoping to put the Xenovore down for good, he re-allocates his CSLs as follows: the 2- and 5-point CSLs to OCV, and the 8- and 10-point CSLs to increase the damage his laser pistol does.

In each of his Phases described above, Trelayne used his 10-point Overall Skill Level to increase OCV or DCV. Since it was allocated to that purpose, he could not also use it for non-combat purposes in those Phases, such as improving his Stealth roll.

Because allocating Combat Skill Levels requires a Zero Phase Action, a character can only allocate them as part of one of his Phases (unless he Aborts and has a CSL he can and wants to apply to DCV; see above). Among other things, this can cause problems for a character who is Stunned. His CSLs, not being Persistent, turn off at the end of the Segment in which he was Stunned. Thus, when he recovers from being Stunned, his CSLs aren't allocated at all and he has to wait for his next Phase (or Abort) to allocate them. Additional restrictions exist about assigning CSLs to DCV; see below.



COMBAT SKILL LEVELS AND STRENGTH-BOOSTING MANEUVERS

Characters who have Combat Skill Levels that can apply to Grab or other Combat/Martial Maneuvers that increase the character's STR for some purpose (*i.e.,* maneuvers built using the *Exert* basis from *The Ultimate Martial Artist*) cannot use CSLs to increase the STR used with the Maneuver. (If the Maneuver allows the character to inflict damage — for example, to Squeeze or Throw a Grabbed enemy — see page 390 for rules about what types of CSLs can apply to increase the damage.)

Uses of Combat Skill Levels

Characters can use Combat Skill Levels in four possible ways: improve OCV; improve DCV; improve damage in Heroic campaigns; improve damage in Superheroic campaigns. Not all ways of using them apply to all types of CSLs. CSLs are not Persistent.

ACCURACY (OCV)

A character can allocate one CSL to give himself +1 OCV with any attack to which the CSL applies. This is the only way to use a 1-point or 2-point CSL; they cannot apply to DCV, damage, or anything else.

DEFENSE (DCV)

A character can allocate one CSL costing 3 or more Character Points to give himself +1 DCV against the same types of attacks (HTH, Ranged, or Mental) for which the CSL can increase OCV. For example, a CSL with a sword-fighting martial art could increase DCV in HTH Combat against any type of HTH attack, but would not increase the character's DCV against any type of Ranged Combat attack. (However, some GMs make an exception to this rule if the CSL applies to Dodge, Martial Dodge, Dive For Cover, or the like; see sidebar, page 121.) Characters can buy CSLs costing 5 points to add +1 DCV against all types of attacks.

Except when Aborting, a character can only allocate a CSL to DCV in a Phase when he uses the attack (or type of attack) to which the CSL can apply to increase OCV. For example, suppose a character has 5-point CSLs with Ranged Combat. If he's fighting in HTH Combat, he cannot use his 5-point CSLs with Ranged Combat to increase his DCV against Ranged attacks, because he's not using a Ranged attack in that Phase. (The GM can, of course, waive this rule if appropriate to the situation.)

Example: *Lt. Barrett has a 5-point CSL with Ranged Combat. In his Phase in Segment 3, he uses his Commando Training Martial Arts to attack an enemy soldier. That means he's fighting in HTH Combat, so he can't use his CSL with Ranged Combat to improve his OCV — none of his Martial Maneuvers are Ranged attacks. Therefore, he also cannot use his CSL with Ranged Combat to improve his DCV.*

A Combat Skill Level (of any cost) applied to DCV is not Persistent. The character must specify when he uses the CSL (he cannot specify that he uses it "at all times"). A character can only make CSLs applied to DCV Persistent if he buys the Skill *Defense Maneuver* at level IV; see page 168.

DAMAGE IN HEROIC CAMPAIGNS

A Heroic character can use *two* Combat Skill Levels costing 3 or more Character Points to increase the damage done by a HTH or Ranged attack by *one* Damage Class (up to a maximum of twice the attack's base DCs) (see pages 405-09 of *The HERO System 5th Edition, Revised* for more information).

For example, a 1d6+1 Killing Damage weapon does 1½d6 if a character uses two CSLs to increase its damage; four CSLs would raise its damage to 2d6, and so on. Similarly, a 4d6 Normal Damage club would do 6d6 if a character used four CSLs to increase the damage. Only Heroic campaigns use these rules.

At the GM's option, a character in a Heroic campaign can use 2 CSLs to add +½d6 of damage to an NND or AVLD attack. Also at the GM's option, the rule regarding CSLs adding to Entangles, Mental Powers, and the like in Superheroic campaigns can also apply to Heroic campaigns.

DAMAGE IN SUPERHEROIC CAMPAIGNS

A Superheroic character can use *two* CSLs costing 3 or more Character Points to add damage as follows:

■ +1 BODY to the damage done by a HTH or Ranged Killing Damage attack; *or* +1 point of damage caused by unusual damaging attack forms such as Ego Attacks, Drains, and NNDs; *or* +1 to the Effect Roll of a Mental Power; or

■ +3 STUN to the damage done by a HTH or Ranged Normal Damage attack.

The added damage applies to the entire damage rolled; it does not apply to each die rolled. The damage the character does cannot exceed the normal maximum for the attack. Only Superheroic campaigns use these rules.

Example: *If a superhero has a KA 1d6 weapon and uses two CSLs to add +1 BODY to the damage, the possible damages rolled on the d6 would be 2, 3, 4, 5, 6, 6 (that's 1d6+1 with a maximum of 6 BODY).*

Non-Damaging Attacks

Characters may have Combat Skill Levels that can apply to Entangle, Flash, Transform, and other attacks that don't literally cause "injury" or "damage" the way Killing Attacks, Normal Damage attacks, Drains, and the like do. As a default rule, they cannot apply CSLs to increase the effect of these attacks. If the GM wants to allow this anyway, in either Heroic or Superheroic campaigns, *two* CSLs add "1 BODY" damage (or +1 to an Effect Roll) to them.

Multiple Attacks

If a character uses a Combat Skill Level to increase the damage done by an Autofire attack, or an attack that's Rapid Fired or Swept, as a default the increase to the damage applies to every "shot." If the GM finds this unbalancing (because of player abuse of the rule or other reasons), he should change it to only the first shot, only the first two shots, or the like.

OTHER RULES

The following additional rules apply to how characters allocate their Combat Skill Levels.

Combat Skill Levels And Weapons

If a character has Combat Skill Levels that apply solely or primarily to a particular weapon (or class of weapons), typically he cannot apply those CSLs for any purpose unless he has the weapon drawn and ready for use. However, the GM should alter this rule if appropriate in light of game balance, special effects, common sense, and dramatic sense. Whether characters have their weapons drawn isn't necessarily the proper deciding factor for every situation.

Combat Skill Levels And Power Frameworks

If a character buys Combat Skill Levels that can apply to multiple Power Framework slots, or all slots in a Power Framework, generally he can only apply those CSLs to the Attack Powers (and possibly some related Powers) contained in the Framework. They shouldn't apply to, for example, Missile Deflection.

If a character buys a 3-point or more expensive Combat Skill Level for use with multiple Power Framework slots, he may choose to apply them to a mix of CV- and ECV-based powers. In this case, when he uses an ECV-based power, the CSLs can increase his OECV or DECV, as appropriate, rather than OCV/DCV.

Thrown HTH Attacks; Ranged Combat At HTH Distances; No Range Attacks

Characters cannot apply Combat Skill Levels with HTH Combat, or with a specific HTH attack, to HTH attacks which are thrown (such as a thrown dagger), unless the GM rules otherwise. On the other hand, characters can apply CSLs with Ranged attacks to Ranged attacks used against targets within HTH Combat distance — the amount of Range (the distance) to the target is irrelevant, what matters is the type of attack. Similarly, a character can apply a Ranged Combat CSL with a thrown HTH Combat weapon, even though they wouldn't apply if the character wielded the weapon in HTH fighting.

If an attack is defined as having No Range, whether inherently or because the character has taken the *No Range* Limitation for it, 5-point Combat Skill Levels with Ranged Combat don't apply to it — 5-point CSLs with HTH Combat do.

Type Of Attack And Manner Of Attack

When characters buy and use Combat Skill Levels, you should keep in mind two related but distinct phenomena: the *type of attack* (the power, weapon, or Maneuver used to attack) and the *manner of attack* (how the character uses it).

For example, if a character buys a CSL with Swords, the type of attack is "sword" (or HKA on a Focus, in technical terms). The manner of attack would be a Combat Maneuver, either a Strike or some sort of Martial Maneuver (if the character has purchased those). If a character buys a CSL with Punch (a type of Strike), then "Punch" is the type of attack, and the manner of attack could be barehanded, armed, with Haymaker, or the like. If a character buys a CSL with Haymaker, then "Haymaker" is the type of attack, and the manner of attack is the Power or weapon used to perform the Haymaker.

Since the *HERO System* rules often allow a character to use a single type of attack in multiple manners, or multiple types of attack in a single manner, this affects how characters buy and allocate Combat Skill Levels. See the Combat Skill Level Table and the text below for more information.

DCV BONUSES

As the text notes, most Combat Skill Levels that can provide DCV bonuses only do so against the same types of attacks for which the Level can provide an OCV bonus. Some GMs prefer to ignore this rule and allow DCV from a 3-point (or more expensive) CSL to apply to any attack, or to apply to any attack when used to improve a defensive maneuver like Block or Martial Dodge. That makes CSLs, particularly 3-point Levels, much more effective, but simplifies game play.

As an optional rule, the GM can distinguish between a character's DCV against HTH attacks and his DCV against Ranged attacks. In this case, a character cannot use a CSL to provide a DCV bonus against Ranged attacks unless it's an 8- or 10-point CSL that applies to All Combat. Furthermore, a character with a CSL that applies specifically to a Ranged attack or class of Ranged attacks can never use the Level to improve his DCV. This optional rule reflects the fact that it's difficult to dodge a bullet or arrow, regardless of your expertise at shooting bullets or arrows. The GM should always use it when characters buy CSLs with Limitations (an accurate gun doesn't make its user harder to hit, for instance).

THE COMBAT MANEUVER *STRIKE*

The Combat Maneuver *Strike* interacts with Combat Skill Levels in an unusual way. Because a Strike can be defined in many ways — a punch, a kick, a knee-strike, a blow from a weapon, a shot from a Ranged attack, and so on — considering it a single Combat Maneuver could create some game balance problems.

The Combat Maneuver *Strike* counts as a closely-defined group of attacks when characters buy CSLs for it. However, it can be broken down into "barehanded" and "armed" for these purposes, since doing so diminishes what a character can apply the Levels to — armed Strikes become a different thing from punches and kicks. A 2-point CSL can be bought to increase OCV with armed Strikes or with unarmed Strikes; a 3-point CSL can be bought to increase just OCV (or just DCV) with any type of Strike (armed or unarmed).

The term "Strike" used in this way refers only to the specific Combat Maneuver *Strike,* described on pages 384 and 392 of *The HERO System 5th Edition, Revised* rulebook. It does not refer to all maneuvers with the word "Strike" in their names (for example, these rules don't apply to Martial Strike or Offensive Strike, which are each a specific type of attack).

1-Point Combat Skill Levels

Combat Skill Levels costing 1 Character Point apiece grant a character +1 OCV with a single, specific type of attack or weapon in combination with a single, specific manner of attack. Examples include:

■ +1 OCV with Martial Block barehanded

■ +1 OCV with Punch (a type of Strike) barehanded

■ +1 OCV with Sword Slash (a type of Strike) with Longswords

■ +1 OCV with Shoot (a type of Strike) with M1911A Pistols

■ +1 OCV with Rapid Fire with Flame Bolt (a specific type of Energy Blast)

USING 1-POINT COMBAT SKILL LEVELS

Characters cannot use 1-point CSLs to improve DCV or damage. They only improve OCV.

1-point CSLs are obviously *very* narrow in application; they represent a character who's trained extensively with one precise type of attack. As with other types of CSLs, if they pose game balance problems for a campaign, the GM should restrict or forbid their use.

2-Point Combat Skill Levels

Combat Skill Levels costing 2 Character Points apiece can grant a character +1 OCV with one of the following, chosen and defined when the character buys the CSL:

1. A single, specific type of attack or weapon used with any manner of attack (or a defined group of manners of attack). Examples include:

■ +1 OCV with Martial Block performed in any way (barehanded, with a weapon, with a chair...)

■ +1 OCV with Punch performed in any way (barehanded, with a weapon, with a chair, with a Haymaker...)

■ +1 OCV with Sweep performed in any way (barehanded, with any Combat or Martial Maneuver, with a weapon, with a chair...)

■ +1 OCV with Longswords with any Combat or Martial Maneuver

■ +1 OCV with M1911A Pistols with any Combat or Martial Maneuver

■ +1 OCV with Flame Bolt (a specific type of Energy Blast) with any Combat or Martial Maneuver

■ +1 OCV with Longswords with up to three specific Combat or Martial Maneuvers

■ +1 OCV or +1 OECV with one Mental Power or Mental Combat attack (*e.g.,* Mind Control)

2. A closely-defined category of types of attacks or weapons used with a single, specific manner of attack. Examples include:

■ +1 OCV with Blocks (normal, Martial, Defensive, and so on) performed barehanded

■ +1 OCV with the Combat Maneuver *Strike* (however defined) performed while armed

■ +1 OCV with the Combat Maneuver *Strike* (however defined) performed while unarmed

■ +1 OCV with Swords (long, broad, bastard...) with Sword Slash (a type of Strike)

■ +1 OCV with Pistols (any type) with Shoot (a type of Strike)

■ +1 OCV with Energy Blasts (of any type) with Haymaker

USING 2-POINT COMBAT SKILL LEVELS

Characters cannot use 2-point CSLs to improve DCV or damage. They only improve OCV. Therefore, characters cannot purchase 2-point CSLs for Maneuvers like Dodge.

2-POINT COMBAT SKILL LEVELS WITH WEAPONS

A 2-point Combat Skill Level, if bought to apply to a weapon or like attack, applies to all weapons of that type, not just one single example of that type of weapon. For example, +1 OCV with Broadswords applies to *all* Broadswords, not just a particular broadsword the character owns. But there's an important *caveat* to this rule: if the weapon has multiple forms of attack (perhaps because it's bought as a Multipower), a 2-point CSL does not increase the character's OCV with all of those forms of attack. Instead, the character must choose one of the attacks when he buys the CSL, and it applies only to increase his OCV with that attack. (This also applies to 1-point CSLs.)

2-POINT COMBAT SKILL LEVELS WITH MOVEMENT

Characters can also buy 2-point Skill Levels with Movement. Although nominally Skill Levels, not CSLs, they can affect OCV and DCV and so deserve mention here. See page 301 for more information and optional rules.

3-Point Combat Skill Levels

Combat Skill Levels costing 3 Character Points apiece can apply in various ways.

3-POINT COMBAT SKILL LEVELS FOR ANY PURPOSE

Combat Skill Levels costing 3 Character Points apiece can grant a character +1 OCV *or* +1 DCV *or* increase damage with one of the following, chosen and defined when the character buys the CSL:

1. A closely-defined category of types of attacks or weapons used with any manner of attack (or a defined group of manners of attack). Examples include:

■ +1 OCV *or* +1 DCV with Blocks (normal, Martial, Defensive, and so on) performed in any way (barehanded, with a weapon, with a chair...)

■ +1 OCV *or* DCV *or* increase damage with up to three Combat or Martial Maneuvers performed in any way (barehanded, with a weapon, with a chair, with a Haymaker...)

■ +1 OCV *or* DCV *or* increase damage with up to three slots in a Power Framework used in any way (barehanded, with a weapon, with a chair, with a Haymaker...)

■ +1 OCV *or* +1 DCV *or* increase damage with Swords (long, broad, bastard...) with any Combat or Martial Maneuver

■ +1 OCV *or* +1 DCV *or* increase damage with Pistols (of any type) with any Combat or Martial Maneuver

■ +1 OCV *or* +1 DCV *or* increase damage with Energy Blasts (of any type) with any Combat or Martial Maneuver

■ +1 OCV *or* +1 DCV *or* increase damage with a single type of attack or weapon (*e.g.,* Punches, Longswords) used in any way (barehanded, with a weapon, with a chair, with a Haymaker...)

■ +1 OCV *or* +1 DCV *or* +1 OECV *or* +1 DECV *or* increase damage with up to three Mental Powers or Mental Combat attacks performed in any way

2. A broadly-defined category of types of attacks or weapons used with a single, specific manner of attack. Examples include:

■ +1 OCV *or* +1 DCV *or* increase damage with up to six Combat or Martial Maneuvers performed barehanded

■ +1 OCV *or* +1 DCV *or* increase damage with up to six Combat or Martial Maneuvers with Longswords

■ +1 OCV *or* +1 DCV *or* increase damage with all the Martial Maneuvers in a single Martial Arts style (regardless of the number of Maneuvers) performed barehanded

■ +1 OCV *or* +1 DCV *or* increase damage with the Combat Maneuver *Strike* (however defined) performed barehanded

■ +1 OCV *or* +1 DCV *or* increase damage with the Combat Maneuver *Strike* (however defined) performed while armed

■ +1 OCV *or* +1 DCV *or* increase damage with all slots in a Power Framework with the Combat Maneuver *Strike* (however defined)

■ +1 OCV *or* +1 DCV *or* increase damage with all Firearms with Shoot (a type of Strike)

■ +1 OCV *or* +1 DCV *or* increase damage with all HTH Combat Weapons with the Combat Maneuver *Strike*

■ +1 OCV *or* +1 DCV *or* increase damage with Energy Attack Powers (as defined by the player and GM) with Haymaker

USING 3-POINT COMBAT SKILL LEVELS

As stated, characters can use these 3-point CSLs for any of the following purposes:

1. To increase OCV.
2. To increase DCV.
3. To increase damage.

3-POINT COMBAT SKILL LEVELS FOR A RESTRICTED PURPOSE

Characters can also buy Combat Skill Levels costing 3 Character Points apiece for more restricted uses — to apply only to OCV or to DCV with a larger group of attacks than those described above.

First, a character can buy Combat Skill Levels costing 3 Character Points apiece only to increase OCV (not DCV or damage) with a very broad category of attacks or abilities, or in a restricted situation. Examples include:

■ +1 OCV with the Combat Maneuver *Strike* (however defined) performed in any way

■ +1 OCV with up to six Combat or Martial Maneuvers performed in any way (barehanded, with a weapon, with a chair...)

Second, a character can buy Combat Skill Levels costing 3 Character Points apiece only to increase DCV (not OCV or damage) with a very broad category of attacks or abilities, or in a restricted situation. Examples include:

■ +1 DCV with the Combat Maneuver *Strike* (however defined) performed in any way

■ +1 DCV with up to six Combat or Martial Maneuvers performed in any way (barehanded, with a weapon, with a chair...)

■ +1 DCV while wearing armor (*i.e.,* to counteract negative DCV penalties imposed by armor)

■ +1 DCV while using a particular Skill (such as Stealth or WF: Off Hand)

In effect, these restricted types of 3-point Combat Skill Level are like 5-point CSLs with a -½ Limitation.

MARTIAL ARTS

If a character has bought 3-point CSLs with a single martial art (say, Karate), and has purchased a Weapons Element for that art (for example, to use Karate Weapons with the Karate maneuvers), the character can use those CSLs with weapons used with his Martial Maneuvers (unless the GM rules otherwise). However, if he buys maneuvers from outside his art (say, a Kenjutsu sword maneuver), he cannot use the 3-point CSLs with his original art with the "outside" maneuvers. Nor can he use the CSLs with weapons he doesn't have a Weapon Element for.

In general, characters do better if they buy 5-point CSLs with HTH Combat, since such Levels apply to the Martial Maneuvers, other maneuvers bought outside the character's style, ordinary *HERO System* Combat Maneuvers, and weapons not used within the character's style.

4-Point Combat Skill Levels

Combat Skill Levels costing 4 Character Points apiece can grant a character +1 OCV *or* +1 DCV *or* increase damage with a group of attacks or weapons broader than what's covered by a 3-point CSL, but less broad than what's covered by a 5-point CSL. Specifically, it can apply to a broadly-defined category of types of attacks or weapons used with any manner of attack (or a defined group of manners of attack) or a very broad category of types of attacks or weapons used with a single, specific manner of attack. Examples include:

■ +1 OCV *or* +1 DCV *or* increase damage with up to six Combat or Martial Maneuvers performed in any way (barehanded, with a weapon, with a chair...)

■ +1 OCV *or* +1 DCV *or* increase damage with all the Martial Maneuvers in a single Martial Arts style (regardless of the number of Maneuvers) performed in any way (barehanded, with a weapon, with a chair...)

■ +1 OCV *or* +1 DCV *or* increase damage with the Combat Maneuver *Strike* (however defined) performed in any way (barehanded, with a weapon, with a chair...)

■ +1 OCV *or* +1 DCV *or* increase damage with all slots in a Power Framework used in any way (barehanded, with a weapon, with a chair...)

■ +1 OCV *or* +1 DCV *or* increase damage with Firearms used in any way (barehanded, with any Combat or Martial Maneuver...)

■ +1 OCV *or* +1 DCV *or* increase damage with HTH Combat Weapons used in any way (barehanded, with any Combat or Martial Maneuver...)

■ +1 OCV *or* +1 DCV *or* increase damage with Energy Attack Powers (as defined by the player and GM) used in any way (barehanded, with any Combat or Martial Maneuver...)

■ +1 OCV *or* +1 DCV *or* +1 OECV *or* +1 DECV *or* increase damage with up to six Mental Powers or Mental Combat attacks performed in any way

■ +1 DCV against HTH Combat attacks (but not Ranged attacks)

■ +1 DECV against all Mental Powers or Mental Combat attacks

■ +1 OCV *or* +1 DCV *or* increase damage with all HTH Combat attacks barehanded

USING 4-POINT COMBAT SKILL LEVELS

Characters can use 4-point CSLs for any of the purposes listed for standard 3-point CSLs; the same rules apply regarding what the DCV bonus can apply to.

In effect, a 4-point Combat Skill Level is like a 5-point CSL with a -¼ Limitation.

5-Point Combat Skill Levels

Combat Skill Levels costing 5 Character Points apiece can be bought to grant a character the following:

■ +1 OCV *or* +1 DCV *or* increase damage with all HTH Combat attacks, used or performed in any way (but not including Mental Powers or Mental Combat attacks)

■ +1 OCV *or* +1 DCV *or* increase damage with all Ranged Combat attacks, used or performed in any way (but not including Mental Powers or Mental Combat attacks)

■ +1 OCV *or* +1 DCV *or* +1 OECV *or* +1 DECV *or* increase damage with all Mental Powers and Mental Combat attacks (both HTH and Ranged), used or performed in any way

■ +1 DCV with all attacks, HTH or Ranged (but not Mental)

At the GM's option, a character could also buy a 5-point CSL to apply to a discrete group of attacks mixing both HTH and Ranged attacks. For example, a character could buy a 5-point CSL for "All Weapons," or with "all of my spells" (where the character's spells involve both HTH and Ranged attacks). However, this type of 5-point CSL can only apply to DCV against attacks falling into that same category. For example a 5-point CSL with All Weapons could improve a character's DCV (or DECV) against weapon attacks (be they HTH, Ranged, or Mental weapons), but not against an unarmed attack or an attack based on an innate power or ability not involving a weapon.

Five-point "DCV Levels" increase a character's DCV against *all* types of attacks, no matter of what type or how many are made against him in a given Segment. They do not, however, increase his DECV.

6-Point Combat Skill Levels

Combat Skill Levels costing 6 Character Points apiece can grant a character +1 OCV *or* +1 DCV *or* increase damage with all attacks in any two of the categories listed for 5-point CSLs (HTH, Ranged, or Mental), used or performed in any way.

In effect, a 6-point Combat Skill Level is like an 8-point CSL with a -¼ Limitation. As such, a character can use one for all types of attacks or powers used with a single, specific manner of attack.

8-Point Combat Skill Levels

The 8-point Combat Skill Level applies to all types and forms of combat — HTH, Ranged, Mental, and anything else the GM thinks up. It can increase OCV, DCV, OECV, DECV, or damage as the character wishes.

At the GM's option, a character could take an 8-point Combat Skill Level to apply to any related group of attacks *and* Skills. The Level would provide a +1 OCV, +1 DCV, increase damage, or add +1 to a Skill Roll within that discrete group of abilities. Examples include All Magic, All Psychic Powers And Skills, or All Vehicles. An 8-point CSL with All Magic could apply to +1 OCV with a magical attack of some sort, +1 DCV against magical attacks, or +1 to the roll with KS: Arcane And Occult Lore, Power: Magic, or a similar magic-oriented Skill.

10-Point Overall Skill Levels

Characters can use Overall Skill Levels as if they were 8-point Combat Skill Levels, if desired.

Other Rules

EQUIPMENT

Combat Skill Levels don't require equipment; they're a purely personal Skill.

BASE TIMES

Combat Skill Levels don't take any time to "use" *per se.* As noted above a character has to use a Zero Phase Action to change the allocation of his Skill Levels.

SKILL LEVELS BY GENRE

Combat Skill Levels work the same in all genres and eras.



COMPUTER PROGRAMMING

Type: Intellect Skill (roll: 9 + (INT/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

A character with this Intellect Skill can program and operate computers. This includes knowledge of, and the ability to use, hardware, software, operating systems, and the like. Among other things, he knows how to:

■ use computer systems and related devices

■ build, maintain, and repair computer hardware

■ evaluate the relative merits of computer systems and software (though he can't do this as well as someone with Analyze Computers could)

■ write, modify, erase, copy, or replace programs and other software using various computer languages

■ penetrate computer security (usually known to the lay public as "hacking," but more correctly referred to as "cracking")

■ search for secured or hidden information

■ retrieve computer records after others have tried to delete or destroy them

■ do the work of a systems administrator, technical support specialist, computer security specialist, computer programmer, computer engineer, software engineer, or similar computer professional (ideally he also has one or more relevant PSs or SSs to serve as Complementary Skills)

Characters with Computer Programming know about computer systems and software generally, the history of computing machines, famous computer designers and programmers, and other related facts. Given the prevalence of computers in modern life, Computer Programming is an important Skill in many Modern- and Future-era campaigns.

Cryptography often acts as a Complementary Skill to Computer Programming rolls. So do Electronics, Security Systems, SS: Mathematics, and various other Skills in appropriate circumstances.

A BRIEF HISTORY OF COMPUTING

The history of computers and computing is so extensive that it can easily fill books larger than this one. Here's a *brief,* simple timeline of major events in the history of computers and computing to provide a frame of reference for characters in historical campaigns or who find themselves traveling back in time.

1623: William Schickard builds the first mechanical calculator based on John Napier's description of "Napier's bones," a calculating device.

1801: Joseph-Marie Jacquard invents a loom controlled by punched cards.

c. 1820: Charles Xavier Thomas de Colmar creates the first successful mass-produced mechanical calculator.

1822: Charles Babbage first describes his "difference engine" for calculating polynomial functions. He obtains funding to build a device eight feet tall, weighing fifteen tons, with 25,000 parts, but fails to complete it.

1833: Charles Babbage begins work on designs for his "Analytical Engine," a general-purpose computing device that could be programmed with punched cards. He continued to work on this project until his death in 1871 but never completes it or builds the Engine due to his constant tinkering and desire to refine his design and add more features. Mathematician Ada Lovelace writes a program that would have allowed the theoretical device to calculate Bernoulli numbers, making her the world's first computer programmer in the eyes of some scholars.

1890: The US Census Bureau uses sorting technology and punched cards to manage the census data.

Early 1900s: Inventors redesign existing calculating devices to use electricity. By the 1930s mechanical desktop calculators become common, and by the late 1940s begin to shrink in size and become ever more sophisticated. (See 1961.)

1927: Vannevar Bush and several colleagues at MIT invent the Differential Analyzer, which can solve differential equations. In other words, it's the first electromechanical analog computer. (Some sources date this invention to 1930.) Developments in analog computers continue through the Thirties, Forties, and Fifties; hybrid analog computers with digital electronics come into use from the Forties through the Sixties.

1936: In Germany, Konrad Zuse begins building a primitive digital computer using parts from what amounts to an Erector Set. In 1939 he receives funding from the Third Reich for further work, and continues developing his Z-series computers throughout World War II and beyond.

Also in this year, Alan Turing publishes his paper describing the theoretical "Turing machine," an influential concept in computer science.

1937: John Atanasoff begins work on the first electronic computer, completing his prototype in October, 1939 and an operational version (the ABC) in 1942. Also in this year, Claude Shannon publishes his master's thesis, which leads to practical design of digital circuits.

1938: The Atanasoff-Berry Computer is invented; although not programmable, it's the first computer to use electronic circuits and binary math.

1940: George Stibitz of Bell Labs demonstrates the Complex Number Calculator and shows that he can send it commands by teletype, making it the first computer used remotely over a telephone line.

1940s: First-generation computers such as Colossus (the first totally electronic computer, developed by the British to help with cryptology) and the Atanasoff-Berry Computer using vacuum tubes and punchcards come into use. Temporary storage (memory) uses acoustic delay lines or Williams tubes.

1941: Development begins on ENIAC (Electronic Number Integrator And Computer) begins and lasts through 1945. Its electronics (including vacuum tubes) make it extremely fast, but programming it involves rewiring it.

1947: Shockley, Bardeen, and Brattain invent the first practical point-contact transistor.

1948: The first Von Neumann machine (a computer that stores instructions and data in a single unit) is built at the University of Manchester.

1950: Europe's first universally programmable computer, MESM, becomes operational in Kiev, USSR.

1951: Great Britain's LEO I computer becomes the world's first routine office computer for J. Lyons & Co.

Also in this year, the US Census Bureau begins using UNIVAC I, which has a metal tape input system rather than punchcards. It's the world's first mass-produced computer with 46 units sold by Remington Rand.

1954: Magnetic core memory becomes the most common form of computer memory, and remains so until the mid-Seventies.

1958: The integrated circuit is invented.

Late 1950s, early 1960s: Second-generation computers using transistors and printed circuits, such as the IBM 1620, come into use.

1961: Sumlock Comptometer produces the Anita C/VII, the first desktop electronic calculator.

Mid-1960s: Third-generation computers using integrated circuits come into use. Large "mainframe" computers become common and increase computing power and storage capabilities, while "minicomputers" make it possible for more people to use computers.

1969: The first ARPANET link, predecessor to the Internet, is established. Developments in packet switching and related technologies continue into the Seventies.

1971: Intel produces the 4004, the first commercial microprocessor, making fourth-generation computers possible. Soon microcomputers and supercomputers appear on the market.

1973: The Xerox Alto is the first personal computer, and the first to use a mouse, a graphic user interface (GUI), and the "desktop" metaphor.

1975: The MITS Altair, the first mass-manufactured home computer appears on the January cover of *Popular Electronics* magazine. It's built with a kit and uses the Intel 8080 processor.

Also in this year, Bill Gates and Paul Allen found Microsoft.

1976: Seymour Cray produces the Cray-1 supercomputer. Also in this year, standards for X.25, the first computer network allowing for public access, are approved.

1977: Steve Jobs and Steve Wozniak produce the Apple II personal computer. The TRS-80 and Commodore PET are also released this year, but prove far less popular, in part because the VisiCalc spreadsheet program is a "killer app" for business use of the Apple.

1979: Compuserve becomes the first service to offer e-mail capabilities to subscribers.

Late 1970s: Local area networks (LANs), including Ethernet, are developed. At around this time, bulletin board systems (BBSes) and networks like FidoNet and UseNet begin to become more popular.

1981: IBM enters the personal computer market with the IBM PC. Later designs improve upon it significantly in all respects. Beginning in 1986 Intel microprocessors allow a market of secondary manufacturers to evolve, so that IBM-style personal computers come to dominate the market instead of Apple computers.

1982: Commodore releases the Commodore 64, said to be the best-selling single model of personal computer ever. Also in this year, Microsoft releases its first version of DOS (PC-DOS 1.1).

1983: TCP/IP protocols become the only approved protocols on ARPANET. They are soon adopted in other regions of the world. Also in this year, Microsoft releases MS-DOS 2.0.

1984: Apple Computers releases the Macintosh.

1985: Microsoft releases Windows 1.0. Windows 2.0 follows in 1987, Windows 3.0 in 1990 (the first version to achieve significant commercial success), and Windows 95 in 1995.

Mid-1980s: ARPANET and NSFNet begin to merge. The term "Internet" is first used.

Late 1980s: The first Internet Service Provider (ISP) companies arrive.

1990: Microsoft Windows 3.0 is released. Apple Computers begins to decline, but its fortunes revive somewhat when Jobs returns to the company in 1997 and introduces innovations such as the iMac and Mac OS X.

Mid-1990s: Microsoft Windows and related products come to dominate the world of software, relegating DOS-based programs to the dustbin of computer history.

1991: The World Wide Web becomes publicly available. Explosive growth follows over the coming decade, leading to, among other things, the "dot-com" boom and bust. As of 2006 the Web is an integral part of world society and commerce.

2000s: Server farms and storage area networks relegate mainframes to specialized uses. Computers become ubiquitous in all walks of life in First World societies, and common even in some Third World nations.

Using Computer Programming

Because computer technology advances and changes so swiftly, the rules in this section of *The Ultimate Skill* are written "generically." In other words, they don't refer to any specific type of computer system, software, or standards. If they did, they'd run the risk of becoming obsolete — computer technology develops and changes at such startling speeds that trying to define it more precisely for game purposes is folly, since most campaigns don't need anything close to that level of detail for the Skill. Instead, these rules require the GM to describe a computer system or database with generic terms that establish modifiers for working with that system. The intent is to allow for "dramatic" or "cinematic" computer use, not to provide "realistic" rules for how computer systems are built and used. Gamemasters who consider themselves knowledgeable in the subject can devise more complex rules using technologies available as of game time and/or in their campaign settings, if desired.

SEARCHING FOR INFORMATION

Perhaps the most common use of Computer Programming is to search for information within a computer system or database. In the case of publicly-available information, such as anything posted on the Internet or World Wide Web, characters probably don't even need to make Computer Programming rolls — in that situation, the *Research* Skill (page 371) serves them better, if there's any need to roll the dice at all.

On the other hand, getting information kept in a secured database or otherwise considered "secret" typically requires Computer Programming. Before a character can search for such information, he may have to use Computer Programming to penetrate ("hack into") the system where the information's kept (see below). Once a character has access to the system, he can make a Computer Programming roll, using the modifiers from the accompanying table. Skills like Research may serve as Complementary Skills.

Searching for information may require only a few Phases, or it may take hours — it all depends on how difficult it is to find the information, how much of it there is, the quality of the computer the character uses, how cinematic the campaign is, and so forth. The GM should set a time to perform the task based on the Time Chart (a minimum of 1 Turn and a maximum of 1 Day are good parameters for most tasks). For each full 3 points by which the character makes his roll (*e.g.,* rolling an 8 when the character has an 11- Skill Roll), reduce the time required by one step up the Time Chart.

PENETRATING SECURED COMPUTER SYSTEMS

Penetrating secured, restricted, or otherwise non-public computer systems and databases is one of characters' most valuable uses for Computer Programming. This is commonly known as "hacking," and people who do it as "hackers." (Many computer specialists prefer the term "cracking" and "cracker," despite how odd they sound to outsiders.) By penetrating a computer system a character can gain access to and enemy's computers to seize control or interfere with their use, invade databanks to search for valuable information, conduct information warfare, and even engage in information theft if he's larcenously inclined.

In game terms, hacking typically involves either a Computer Programming roll made by the character at a penalty, or a Skill Versus Skill roll pitting the character's Computer Progamming against the Computer Programming roll of the person or system he's trying to defeat. (In either case, Security Systems may function as a Complementary Skill, at the GM's option; this is particularly appropriate if the character takes the *Only Versus Computer Security Systems* version of that Skill [see page 291]; Cryptography may also serve as Complementary). The Computer Programming Modifiers table lists the penalty, and the corresponding roll if you prefer that method, for computer systems with various levels of security.

Attempting to penetrate computer security typically requires at least 1 Hour, and may in fact take days, weeks, or months of laborious checking of possible passwords, efforts to bypass preliminary security software or find "back doors" into

COMPUTER PROGRAMMING MODIFIERS

SEARCHING FOR INFORMATION

Type Of Information	Modifier
Not hidden	+2
Poorly hidden	+1
Hidden	+0
Well hidden	-2
Very well hidden	-4

PENETRATING COMPUTER SYSTEMS

Type Of System	Modifier	Skill Roll	Example
Unsecured	+2 or better	None	Typical home computer
Poorly secured	+1	8-	Typical business computer
Secured	+0	9- to 11-	Low-end government, law enforcement, and corporate computers
Well secured	-1 to -3	12- to 14-	Average government, law enforcement, and corporate computers
Very well secured	-4 to -6	15- to 17-	High-end government, law enforcement, and corporate computers
Extremely well secured	-7 to -9	18- or better	Military computers

Other Circumstances	Modifier
Character has some information or clues regarding system passwords	+0 or better
Character has found exploitable flaws in the same or similar software	+0 or better
Computer system is...	
Much less advanced than what the character's used to	+6 or better
Less advanced than what the character's used to	+1 to +5
More advanced than what the character's used to	-1 to -5
Much more advanced than what the character's used to	-6 or worse

"Other Circumstances" penalties are cumulative with Type Of System penalties, but in most cases the maximum penalty the GM should impose is -10 (equivalent to an Extraordinary Skill roll).

The "computer system" modifiers are a specialized form of the Advanced And Obsolete Technology rules from page 39; the GM may substitute the standard rules instead if he prefers.



the system, and so forth. The GM should set a Base Time to perform the task based on the Time Chart. For each full 3 points by which the character makes his roll (*e.g.,* rolling an 8 when the character has an 11- Skill Roll), reduce the time required by one step up the Time Chart. For dramatic purposes, the GM can condense the time further as he sees fit — characters in movies and on television sometimes seem to penetrate computer security and find *just* the information they need in remarkably short periods of time. In a *Champions* game, it's possible that a super-intelligent hacker could find a way to penetrate a computer's security in a matter of Phases during a battle!

After Penetrating Security

After a character bypasses system security and penetrates a computer system to gain access to that computer, he may have to make one or more additional Computer Programming rolls to do whatever he wants to do in that system. If he's just searching for (and perhaps stealing) information, use the "Searching For Information" modifiers in the Computer Programming Modifiers table. If the character wants to interfere with the system in some way — take control of it, plant secret programs in it, interfere with others' ability to use it, cause it to crash, or the like — apply the "Type Of System" modifiers to his roll, but halve them.

Cracking Access

In most cases, characters can access computer systems remotely, since the systems are hooked up to the Internet (or Cybernet) in some way. One way of increasing the security of a computer is not to connect it to any other system at all — to make it a "standalone." That means the character has to gain physical access to the computer before he can try to crack its security and find the data he needs... and just getting to it may be an adventure!

Eliminating Traces

A savvy computer cracker knows he has to conceal the traces of his work — where he logged in from and other information that might allow the authorities to track him down. Doing this requires a separate Computer Programming roll for use in Skill Versus Skill Contests with computer security specialists who might come after him.

Phreaking

Phreaking (an outdated term in some respects) refers to manipulating the telephone system, often for illegal purposes such as making free long-distance calls. Some scholars regard phreaking as the earliest form of computer cracking. The GM can allow characters to phreak using Computer Programming and the rules for penetrating computer security; Bugging (given its use to wiretap) and Skills like KS: Telephone System serve as Complementary Skills.

Phreaking is easier on older analog telephone systems, which use pulse dialing (such as old-fashioned rotary-dial phones). More modern digital phone systems use DTMF (dual tone multi-frequency), making them much harder to phreak (-2 or worse penalties to rolls).

PROGRAMMING

A character with Computer Programming can write, modify, erase, copy, or replace programs using various computer languages (but see *Software,* below). Although a simple program can be

PROGRAMMING TABLE

Complexity Of Program	Minimum Base Time
Incredibly Complex	1 Season or longer
Highly Complex	1 Month
Very Complex	1 Week
Complex	1 Day
Average	1 Hour
Simple	20 Minutes
Very Simple	5 Minutes

created in just a few minutes, typically the Base Time for creating or making major modifications to a program is 1 Hour or longer (see the Programming Table). Erasing, copying, or replacing programs usually takes much less time — perhaps as little as a few seconds, but usually at least 1 Turn. In a dramatic sense, the character often succeeds *just* in time to avoid detection or make his escape.

RETRIEVING COMPUTER RECORDS

Characters can also use Computer Programming to retrieve computer records and files. Ordinarily this doesn't even require a roll; the character just has to search for what he wants (usually with the help of searching software). However, sometimes people delete files from their systems, or even damage or destroy the hard drives or other physical media on which the files are stored. Recovering that data requires more effort.

Retrieving or recovering a file that's just gone through the basic deletion process requires a roll, usually with a bonus (+2 or more), or at least no penalty. If someone knows what they're doing and takes significant steps to remove a file, the character typically has to engage in a Skill Versus Skill Contest using Computer Programming to defeat their handiwork (or make his roll at a significant penalty, such as -3 or greater). This may require specialized software or equipment. However, if a character has the specialized resources he needs, keeping him from recovering a "deleted" file is very, very difficult — even the US military's extensive protocols for fully deleting data (which involve filling the storage media with meaningless data and completely erasing it more than forty times) aren't actually guaranteed to work. With the right equipment, a character can use Computer Programming to recover data even from broken or fragmented physical media, though the worse the condition of the physical media the harder it is to work with (impose penalties of -3 or greater). The only way to ensure that a properly-equipped character can't recover deleted files is to literally grind the physical media into powder.

Retrieving deleted or lost files typically takes 5-20 Minutes for data that hasn't been subjected to thorough attempts to delete it. If such attempts have been made, or the physical media is damaged, the Base Time rises to 1 Hour (or even much longer).

Other Rules

SOFTWARE

In games where characters do a lot of Computer Programming work, the GM may want to add flavor to the campaign and keep characters from unbalancing the game by restricting the use of the Skill based on software. In the modern day there are dozens of programming languages and major software packages, and just because a character knows how to use one doesn't mean he can use the others with equal fluency. (In Future-era campaigns, this problem may still exist, or all computer programming may have been streamlined to a single uber-language that runs all software.)

In game terms, for each Character Point spent on Computer Programming a character may choose one computer programming language, major software package/product, or the like that he knows how to use. (Thus, a character who spends the standard 3 Character Points for Computer Programming knows three languages/software packages.) A character can buy more languages/software packages without increasing his Computer Programming roll at the rate of ½ Character Point per language/software package. (Since the minimum cost of anything is 1 Character Point, this is only relevant if the character buys two, four, or some other even number of languages/software packages; otherwise the odd one gets rounded up to a cost of 1 Character Point.)

Example: *Marcus V, a character in a Dark Champions campaign set in the early twenty-first century, spends 5 Character Points to buy Computer Programming with +1 to the INT-Based Roll. Therefore he gets to choose 5 programming languages or software packages that he knows how to use. He chooses C++, Java, UNIX, Microsoft Windows, and the Adobe suite of desktop publishing products.*

EQUIPMENT

By definition, Computer Programming requires equipment: a computer to work on or with. Lacking that, a character at best has knowledge he can't apply to anything.

POWERS AND COMPUTER PROGRAMMING

Cyberkinetic powers, such as those described in *The UNTIL Superpowers Databases,* are specifically designed to let a character interface with and manipulate computers without having to use Computer Programming. Many of them are built as Mental Powers that work against the Machine class of minds.

CONSEQUENCES OF FAILURE

With most Computer Programming tasks, a failed roll simply means the character didn't accomplish his task: the computer he built or repaired won't work; the program he wrote won't run (or won't do what he wants it to); he can't find the information he needs; he can't penetrate the computer's security. But a badly-failed roll (by 4 or more) may have dire

consequences. For example, it could mean he crashes the system or his program degrades his computer's performance. If he's trying to crack computer security, he could set off an alarm, leave a trail that points investigators right to him, get caught in some sort of software "trap," or (in Cyberpunk games) trigger security programs that burn out his brain.

BASE TIMES

Determining the Base Time for a Computer Programming task depends partly on the "realism" level of the campaign. Realistically, many of the most common uses of Computer Programming, such as hacking into computers and writing complex programs, take hours, days, or months. But in novels, movies, and television, characters often seem to perform these tasks with great speed (since a show or movie featuring nothing but hours of someone typing in passwords to try to access a secured computer wouldn't exactly be entertaining). Therefore the GM should set the Base Times for Computer Programming depending on how "cinematic" he wants to be — though even in a cinematic game, major acts of hacking usually take minutes or hours. See the text above for suggested Base Times for various Computer Programming tasks.

SUBDIVIDING COMPUTER PROGRAMMING

In a campaign that emphasizes information warfare and the like, having a single *Computer Programming* Skill may not work — GMs and players may want to take technical differences into account. One of the easiest ways to do this (besides the Skill Roll penalties suggested in the Computer Programming Modifiers table) is to split Computer Programming up into various categories (just like Gambling and Survival). The accompanying box has a sample list of subcategories, but the GM can change or add to it as he sees fit. Characters can learn any one category for 2 Character Points for a (9 + (INT/5)) roll; each additional category costs +2 Character Points, or each additional subcategory +1 Character Point; improving the roll for all categories and subcategories known costs +2 Character Points for each +1 to the roll. At the GM's option, a character can make rolls pertaining to types of computers he hasn't paid Character Points for, but at a -3 (or greater) penalty to all rolls.

COMPUTER PROGRAMMING BY GENRE

Cyberpunk/Near Future; Dark Champions

The use of computers (and related forms of high technology) practically defines some aspects of this genre — it's where the "Cyber" in Cyberpunk comes from. In a Cyberpunk-era game, GMs should not only consider subdividing Computer Programming, they may want to refine the categories even more, right down to specific manufacturers and years. After all, programming an IBM computer running a Microsoft operating system in 1992 is very different from doing the same thing in 2006. In Cyberpunk minute imbalances in technological capability and skill can mean the difference between life and death.

EXPANDED COMPUTER PROGRAMMING

Personal Computers
Handheld Computers
Portable Computers
Desktop Computers

Computer Networks And Servers
Local Networks
The Internet
Cyberspace (if appropriate to the campaign)
Mainframe Computers And Supercomputers

Hacking And Computer Security
Infiltration/Penetration
Defense

Military And Government Computers
Government Computers
Law Enforcement Computers
Military Computers

Artificial Intelligence (if appropriate to the campaign)

In a technology-oriented game, such as a *Cyber Hero* campaign, the GM may refine the categories even more to specify manufacturers and/or years of manufacture. For example, programming an IBM computer running a Microsoft operating system in 1996 is different from doing the same thing in 2006.

This same advice applies to computer-heavy modern-day action-adventure games.

Fantasy

Generally speaking, Fantasy characters can't purchase Computer Programming; it has no application whatsoever in the typical *Fantasy Hero* campaign. However, if you think of it not strictly as *Computer* Programming but "Information Systems Use," it might be a Skill that wizards in High Fantasy campaigns use to manipulate information-storing mystic crystals and the like.

And of course, not all Fantasy campaigns take place in alternate worlds of dragons and sorcerers. Urban Fantasy games could easily feature computers and Computer Programming. Perhaps the Internet is really a thing of magic that uses computers to interact with the outside world. "Cybermancers" might use spells to manipulate computers, or computers as a way to cast their spells, or both. Sorcerers might refer to what they do as "running subroutines" instead of "casting spells," even though the end result is the same.

Pulp

Generally, this Skill is inapplicable to *Pulp Hero* games; computers as they're known in the modern era don't exist. The only characters who might buy it are scientists like Vannevar Bush who are trying to create "differential analyzers" and similar calculating devices.

Science Fiction

Except for a few Low SF settings such as Frank Herbert's *Dune,* computers are omnipresent in Science Fiction. From massive, hyperintelligent supercomputers capable of running entire civilizations, to bio-computers able to catch true "viruses," to hand-held computers containing many thousands of times the processing power and storage capacity

of the computers of twenty-first century Earth, they crop up in *Star Hero* games all the time. That makes the *Computer Programming* Skill especially useful in Science Fiction campaigns.

Paradoxically, computers become both more and less complex in Science Fiction. On the one hand, ease-of-use and user-friendly features improve to the point where most characters can "perform" complex computing tasks simply by telling the computer what they want to do — they never have to press a key or control panel. Thus, Computer Programming as a Skill may die out among large segments of the population. It would be replaced by, if anything, a *PS: Use Computer* Skill. On the other hand, the internal workings of computers become more and more sophisticated, meaning engineers, scientists, and hard-core computer users still need Computer Programming to build, repair, and get full benefit from their computers. Characters may need a Fringe Benefit like *Galactic Computernet Access Card* to use certain networks or computer systems, in much the same way that people on modern Earth subscribe to Internet service providers.

In some settings, computers diversify incredibly, making the ability to use or program one type of computer virtually useless when the character encounters another type of computer. You can simulate this with a -1 to -5 penalty to Computer Programming rolls, depending on the degree of difference between the systems, or you could use an expanded version of the subdivided Computer Programming described above. (Again, ease-of-use features may compensate for much of this.) But in a Space Opera or Pulp-oriented *Star Hero* campaign, having a single *Computer Programming* Skill suffices; there's no point getting bogged down in technical details or imposing penalties for using unusual systems.

Superheroes

In a Superhero setting, computers can range from everyday varieties, to weird bio-computers, to ultra-intelligent but warped AIs who want to take over the world and either eradicate or enslave humanity. Computer Programming is often a crucial Skill, and some superheroes are so good at it that they can hack into systems in the blink of an eye. Cyberkinetic characters (see above) can manipulate computers with the power of their minds!

Western/Victorian

The timeline above provides brief information about the types of "computers" available during this period. The only characters who'd buy the Skill are experimental scientists like Charles Babbage who are on the frontiers of technological innovation.

CONCEALMENT

Type: Intellect Skill (roll: 9 + (INT/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

This Intellect Skill represents a character's ability to hide things and to find things others have hidden — important papers, weapons, jewels, artifacts, drugs, and so forth. A character with Concealment knows how to hide things (or find hidden or concealed things), and how to make hiding places for things (such as a fake book that's really a miniature safe) given the proper tools, materials, and time. Concealment adds the most enjoyment to the game when the GM actually describes the situation, and the character then describes exactly where he hides the object (or where he searches for a hidden object).

Concealment is an Everyman Skill for all genres.

CONCEALMENT BASICS

When a character hides something and someone else tries to find it, you use their Concealment Skills in a Skill Versus Skill Contest. If the searcher doesn't have Concealment, he can make a PER Roll, but the GM should apply at least a minor penalty — -2 to -3, if not more. Otherwise there's not as much incentive for characters to buy Concealment.

Several common modifiers apply to Concealment rolls. The first is how cluttered an area is — or put more generically, how many good hiding places it offers. (See the Concealment Modifiers table.) The second, and generally more important, factor is the size of the object in comparison to the space in which it's hidden (see the Objects And Hiding Places table). The third is how thoroughly a character searches; this applies to areas (rather than people) and affects both the Skill Roll and the time required.

HIDING AND FINDING THINGS

Each object a character might want to hide has a Perception Modifier ("PER Mod") that roughly indicates its size and shape. Items and places in which characters commonly try to hide things — briefcases, articles of clothing, and so on — have a PER Mod rating as a hiding place, indicating how easy it is to conceal something beneath or inside them.

If the object's PER Mod is less than or equal to the PER Mod rating of the hiding place, the object is hidden from view. Other characters can only find it in one of two ways. First, they might find it with a search (see below) and successful Concealment Versus Concealment (or PER Roll) Contest. The character trying to find the object suffers a -1 penalty to his Concealment or PER Roll for each point of PER Mod the object is smaller than its hiding place. Second, a character who has reason to be suspicious of the character and looks at him closely might get a roll to see that he's hiding something. For example, if a character looks at someone and asks specifically, "Is he carrying something under his jacket?", he can make a Concealment or PER Roll to check. In this

case, the character suffers a -1 penalty to his Concealment or PER Roll for each point of PER Mod the object is smaller than its hiding place. (Obviously, the GM should only allow this if there's a realistic chance the character could see some evidence of the hidden object; tiny items don't cause noticeable bulges or other indications of their presence.)

Example: *"Bull" Robinson is carrying an AMT Backup pistol (PER Mod +1) under his surf jacket (PER Mod 2). Casual observers won't notice the gun; anyone specifically looking for it will take a -1 on his Concealment or PER Roll to find it.*

If object's PER Mod is larger than the PER Mod rating of the hiding place, then the object might be spotted — anyone has a chance to notice it, since it causes an unsightly bulge in the person's clothing or otherwise won't fit into the hiding place properly. Anyone the character deals with notices the bulge (or other indications of a hidden object) with a successful Concealment or PER Roll. At the GM's option, the roll to notice the object receives a bonus equal to (Object's PER Mod - Hiding Place's PER Mod).

Example: *Bull later decides to carry a Llama Super Comanche .44 magnum revolver (PER Mod +3) under his jacket. Because the gun is bigger than the jacket's PER Mod rating (2), casual observers can notice it. People are starting to talk about Bull.*

Example: *Valdorus the assassin is trying to sneak a crossbow (PER Mod +6) through town by concealing it underneath his cloak (PER Mod 5). At the GM's option, anyone who tries to make a Concealment or PER Roll to notice that he's hiding something receives a (6 - 5 =) +1 bonus to the roll.*

A successful Concealment or PER Roll tells a character that the person he's examining is carrying a hidden object, but not what the object is. As long as clothing (or the like) still covers an object, the object's exact identity remains unknown. However, the character might learn something from the nature of the hiding place, shape of the bulge, or the like. For example, if he notices a bulge under a person's left armpit, it's probably a gun in a shoulder holster — but he won't know exactly what type of gun until it comes out into view.

Some objects are so large they can't be hidden in an area. If a hiding place's PER Mod is 2 or more points smaller than the object's PER Mod, typically the object is not considered hidden; anyone who's close enough can notice it without even having to make a PER Roll. In other words, don't even try hiding a +7 PER Mod machine gun under your hat.

The Objects And Hiding Places table lists the most common concealment spots for objects, and the PER Mods of various items. If the table doesn't include an item, use the listed objects as guidelines to determine an appropriate PER Mod.

The PER Mod rating of the jackets and coats in the table represents them buttoned up. If such an article of clothing is left unbuttoned, the PER Mod rating of its hiding spaces increases by 1. But when a character moves with an unbuttoned jacket, there's a chance of 1 on 1d6 (1 or 2 if he's running) for the jacket to open and reveal any objects hidden under it.

If a character has clothing specifically tailored for one piece of equipment or weapon, the PER Mod rating goes up by 1. A suit jacket specifically designed to hold a Colt Anaconda (PER Mod +3)

OBJECTS AND HIDING PLACES

HIDING PLACES

Location/Item*	PER Mod
Body Cavities	
Mouth	+0
Nose	-2
Rectum	-1
Stomach (swallowed item)	+1
Teeth, false/hollow	-3
Vagina	+0
Clothing	
Armor	+1
Bandage, underneath	-3 to +0
Belt, money	+0
Boots	+1
Buckle, belt, hollow	-3
Button, hollow	-3
Cast, inside	-1 to +3
Cloak	+5
Coat (heavy, long jacket)	+4
Cuff, rolled-up	+1
Diapers, baby's	+1
Eyeglasses, hollow stems	-2
Hat	+1
Hearing aid, hollow	-2
Jacket, men's suit	+2
Jacket, windbreaker	+3
Jewelry, hollow	-3 to +0
Lapel, underneath	-2
Limb, false	+1 to +3
Lining of clothing	-2
Overcoat (trenchcoat)	+5
Shirt, blouse, tunic, tabard	+1
Skirt, dress, or robes	+1
Sleeve	+1
Tie, in knot of	-2
Watch, inside back	-3
Wig, underneath	+1
Containers	
Briefcase, backpack	+4
Camera case	+2
Chest	+4 to +7
Handbag, large	+3
Handbag, small	+1
Lipstick tube	-1
Saddlebags	+3
Trunk	+8 to +10

*: For hiding places not related to a person or things he wears/carries, the GM should compare the size of the hiding place to one of the objects on the table and assign it an appropriate PER Mod rating. For example, a hollowed-out cavity at the top of a newel post might have a PER Mod of 1-2, a fake muffler on a car might have a PER Mod of 2-3, the hollow handlebars of a bike or motorcycle might have a PER Mod of -1 to 1.

Continued on next page

OBJECTS AND HIDING PLACES

HIDDEN OBJECTS

Item	PER Mod
Assault rifle	+5 to +7
Bag/purse of coins	+1 to +3
Binoculars	+2 to +3
Book, notebook, papers	+1 to +3
Bow, long	+4 to +7
Bow, short	+3 to +5
Bullet	-1 to 0
Cash, roll of	+1
Coin	-1 to +0
Computer chip	-2 to -1
Crossbow	+4 to +7
Dagger	+2 to +3
Derringer	+0 to +1
Drugs, plastic bag of	+0 to +1
Earring	-3 to +0
Film, roll of	+0
Gemstone	+0
Grenade	+2
HumanInfant/Toddler	+3 to +5
Child	+6 to +9
Adolescent	+10 to +12
Adult	+12 or more
Knife (large)	+1
Knife (small), shuriken	+1
Laptop computer	+3
Microfilm, roll of	-3 to +0
Pen or pencil	+1
Pill	-2
Pistol	+2 to +4
Pocket watch	+1
Rifle, shotgun	+4 to +7
Ring	-1
Spear, polearm	+5 to +8
Staff	+4 to +7
Submachine gun	+3 to +5
Sword, broad/bastard	+4 to +6
Sword, short	+2 to +4
Wand	+2
Watch	+0

would have a PER Mod rating of 3 and just barely hide the gun.

A character can use Concealment to hide most objects with PER Mod +0 or lower on his person (*i.e.,* behind his belt buckle, in a specially hollowed-out shoe heel, inside a specially-tailored pocket, or the like). Other persons can't find such objects visually, only with an appropriate search (often a Strip Search, or even x-raying the subject in the case of swallowed items) and a Concealment Versus Concealment Contest. However, the GM may need to invoke the rule of common sense — some items, no matter what their PER Mod rating, are simply too large to fit inside some body cavities or the like. On the other hand, despite an object's overall size, its shape may make it possible to fit into some places similarly-sized objects cannot (such as hiding a wand up one's sleeve).

Hidden Compartments

Some Vehicles, Bases, and the like have concealed compartments where people can hide things. You can buy this as Concealment with the *Self Only* and *Partial Coverage* Limitations. The Partial Coverage defines the size of the space (and thus what can fit within it). Designers must take care not to make "hideyholes" too large, for the larger they are, the easier they usually are to detect (the unaccounted-for space tips off searchers). If a character wants multiple compartments for his Vehicle, he can apply the standard "+5 Character Points doubles the number of items of equipment" rule.

Because a hidden compartment is "separate" from the rest of the Vehicle or Base, it's usually best to buy it as a distinct use of Concealment, rather than simply buying bonuses to an overall Concealment roll. Similarly, GMs may rule that some types of Skill Levels don't apply to the Concealment roll for hidden compartments.

Searching A Person

Whenever a character gets captured, his captors will probably search him. Characters with Concealment know how to perform a search of a person properly. There are three kinds of searches: a Fast Patdown; a Thorough Patdown; and a Strip Search. All three use the basic Concealment Versus Concealment (or PER Roll) system.

A *Fast Patdown* only takes a Full Phase and will find most large items hidden on a character's torso. The searcher rolls his Concealment or PER Roll, using the PER Mod of any hidden object a searchee is carrying on his torso; he must make one roll per item, and finds one item for each roll that succeeds. The odds are he'll find a gun or a knife, but there's a small chance he'll miss one.

A *Thorough Patdown* takes a full Turn and can find most large items hidden anywhere on a character's body. The searcher must make one Concealment or PER Roll for each hidden item, with the object's PER Mod as a bonus and also a +1 bonus for taking extra time. Each roll that succeeds indicates a found item.

A *Strip Search* is exactly what it sounds like. It takes at least 1 Minute, and often 5-10 Minutes or more. The searcher removes all of the subject's clothing, jewelry, and carried objects and searches them, sometimes even systematically destroying each item to make sure everything hidden in it is found. A character performing a Strip Search automatically finds any item not hidden with the *Concealment* Skill without having to roll. For objects hidden using Concealment, he must win a Concealment Versus Concealment Contest, but he receives the object's PER Mod as a bonus, plus also a +5 bonus for taking plenty of time and being thorough. Each roll that succeeds indicates a found item. After searching the clothing, the searcher turns his attention to the subject and searches him thoroughly, right down to his body cavities; hiding anything is almost impossible. If the GM even rules that rolls are necessary, the same rules apply as for the clothing, and he may want to apply additional bonuses.



Searching An Area

When characters decide to search an area, they should indicate how thoroughly they want to search it. Area searches fall into four categories: Perfunctory; Average; Thorough; and Very Thorough. As indicated in the Search Times table, these four categories govern how long a search takes and what modifiers apply.

Other Skills

Characters can also use Concealment to hide and find things associated with other Skills — bugs (Bugging), traps and security devices (Security Systems), and so forth. Any Skill directly connected with the object being hidden (like Demolitions when hiding a bomb) acts as a Complementary Skill.

HIDING ONE'S SELF

A character may hide himself from a search using Concealment (for example, Andarra could wedge herself behind a console to hide from the Denebian Secret Police search team). A character should use Stealth for any active concealment, such as when he tries to move silently; only use Concealment when nonmoving persons try to hide themselves for a long period of time (more than a Turn). For shorter periods of time, a character can hide himself using either Concealment or Stealth (his choice), and with the GM's permission he can use the other Skill (if he has it) as Complementary. (At the GM's option, for simplicity's sake any of a character's efforts to hide or conceal himself use Stealth; in this case Concealment becomes a Skill just for hiding and finding objects and the like.)

When a character hides himself using Concealment, pit his Concealment roll against the searcher's Concealment or PER Roll in a Skill Versus Skill Contest. Standard Concealment modifiers apply.

CONCEALMENT MODIFIERS

Finding Hidden Objects	Modifier
Amount/quality of hiding places	
Exceptional capacity for hiding things	-4
Good capacity for hiding things	-2 to -3
Average capacity for hiding things	-0 to -1
Poor capacity for hiding things	+1 to +2
Very poor capacity for hiding things	+3 to +4

MANUFACTURING HIDING PLACES

Characters with Concealment know how to manufacture hiding places. This includes things like building secret or concealed compartments into furniture or walls, creating false bottoms in luggage or other containers, sewing hidden pockets into clothing, hollowing out books, and so forth. However, unless a character possesses a relevant PS with which to actually do the work, such as PS: Carpentry or Sewing, he's not likely to do a very good job of it. His relatively poor craftsmanship may even provide bonuses for Concealment rolls to find the hiding spot.



SPECIFIC SITUATIONS

Concealment generally only applies to Sight (and often just to Normal Sight — Infrared Perception can often easily finding hidden objects, concealed compartments, and the like). The GM and players must apply some common sense to resolve difficult situations. For example, ordinarily it wouldn't be difficult for an animal to find a Concealed person via Smell — but if the person's hidden inside an airtight area or compartment of some sort, obviously that's not going to be so easy. Similarly, an object might not have any scent to speak of, making it difficult to detect with Smell.

Whether "just being out of sight" conceals someone or something from a Detect depends on how the Detect is built and defined. If it's part of the Sight Group, then blocking sight would block the Detect. If it's part of some other Sense Group, or no Sense Group, maybe not — for example, people can sometimes smell or hear things they can't see. Apply common and dramatic sense when problems arise, and you should be able to resolve most difficulties to everyone's satisfaction.

Concealment is an Everycreature Skill for animals. As such, it represents only their ability to hide themselves, not to hide other objects (a -½ Limitation). Animals skilled at caching food for later consumption, or at hiding other objects, buy this Skill normally. Animals with camouflage buy bonuses to Concealment, but usually apply a Limitation representing the nature of their protective coloration (see the *Camouflage* template on page 22 of *The HERO System Bestiary* for some examples).

Some Vehicles are designed to blend in well with the terrain they operate in — they're camouflaged, in other words. Vehicles can buy this as Concealment with the Limitations *Self Only* (-½) and *Only In Specific Environments/Situations* (-1; possibly less if terrain occurs frequently). If the Vehicle can change coloration (or the like) to adapt to a wide variety of environments or settings, the latter Limitation doesn't apply, though *Costs Endurance* might.

In some cases the GM can even allow characters to use Concealment to represent acute powers of observation — a sensitivity to small cues and clues that tells the character something's amiss. For instance, a successful Concealment roll might let a mystic notice the runes hidden in the design of a mosaic floor, or spot the vampire in a group of people.

EQUIPMENT

Most uses of Concealment don't involve equipment — first and foremost the Skill represents a character's personal ability to hide things or find hidden objects. But when personal ability isn't enough, characters can use all sorts of sensory devices to make the job of finding hidden things easier. Infrared scanners, x-ray scanners, radars, and any number of high-tech sensors from Science Fiction campaigns can all make searching much easier. On the other hand, camouflage garb may make it easier for a person to hide himself or large objects in some situations.

POWERS AND CONCEALMENT

Enhanced Senses can take the place of the sensors described above, making Concealment unnecessary in many instances. Invisibility and Images make it easier for a character to hide himself (or sometimes objects), though maintaining them for long periods of time may pose a problem. Darkness and other Sense-Affecting Powers can prevent a character from using Enhanced Senses, forcing him to fall back on old-fashioned searching.

CONSEQUENCES OF FAILURE

Failing a Concealment roll to hide something (or someone) usually means one of two things:

1. The object isn't really hidden properly — it's out in the open where anyone can easily perceive or find it.

2. The object is nominally hidden, but it's in a location a searcher can (and almost certainly will) check easily.

But a failed Concealment roll doesn't necessarily mean someone will find the object. Just because an object's in an open, obvious place doesn't mean someone will find it — remember Poe's story *The Purloined Letter?* It's just as possible a searcher will miss his PER Roll or Concealment roll and overlook something, even if it seems glaringly obvious to someone else. (This is an exception to the normal Skill Versus Skill Contest rules.)

Failing a Concealment roll to find something just means the character didn't find it. A badly-failed roll (by 4 or more) means the character's convinced the object isn't hidden where he searched (and possibly that it *couldn't* be hidden there).

BASE TIMES

Hiding an object can take as little as 1 Phase, but 1 Turn is probably a more average time. If the character wants to go to great lengths to hide something (for example, to take apart a piece of furniture to hide something in a hollow leg), it can take 20 Minutes or more, depending on just how elaborate and thorough the character is.

The Base Times for searching a person are listed above: one Phase for a Fast Patdown; 1 Turn for a Thorough Patdown; 1 Minute or more for a Strip Search. The time required to search a location depends on (a) the size of the location, and (b) how thorough the searchers want to be. The accompanying Search Times table lists some suggested Base Time parameters.

SEARCH TIMES

Location	Perfunctory Search	Average Search	Thorough Search	Very Thorough Search
One hex	1 Segment	1 Phase	1 Turn	1 Minute
Apartment	1 Minute	10 Minutes	30 Minutes	1 Hour
Car, single room	1 Turn	1 Minute	10 Minutes	20+ Minutes
House, Large	1 Hour	6 Hours	1 Day	2+ Days
House, Medium	30 Minutes	1 Hour	6 Hours	1 Day
House, Small	10 Minutes	30 Minutes	1 Hour	6 Hours
Motorcycle	1 Turn	1 Minute	5 Minutes	10 Minutes
Tractor-Trailer	5 Minutes	20 Minutes	1 Hour	6 Hours

Thoroughness Of Search	Skill Roll Modifier	Base Time Modifier
Perfunctory	-2 or -3	x0.25 to x0.50
Average	+0	x1
Thorough	+1	x2
Very Thorough	+2	x3

For other areas, the GM can use the listed examples as guidelines. For example, searching the interior of a merchant's starship might be the equivalent of searching a Large House (or maybe several Large Houses).

The Base Time Modifier listed under "Thoroughness Of Search" does not apply to the locations listed in the Search Times table, since they already factor into the listed times; they're provided as a guideline for the GM if necessary.

SUBDIVIDING CONCEALMENT

If appropriate, the GM can divide Concealment into two Intellect Skills: *Find* and *Hide.* The former's used to find hidden objects and people, the latter to hide them (and to build concealed compartments and the like). Splitting Concealment this way isn't necessarily logical, but it makes it easier for a character to be highly skilled at one aspect of Concealment but not at the other.

CONCEALMENT BY GENRE

Concealment works the same in all genres. In genres where characters have access to high-tech searching devices or divinatory magic, it's possible that finding things may become much easier, but hiding them usually remains basically the same.

CONTORTIONIST

Type: Agility Skill (roll: N/A 9 + (DEX/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

This Agility Skill, sometimes known as *Escape Artist,* gives a character the ability to manipulate his body so he can get out of ropes, bonds, and other constraints (including Grabs and Entangles). Contortionist also allows a character to contort his body so he can fit into spaces he's normally too big for. This is ideal for escaping from collapsed mine shafts, hiding in small cupboards, and the like. Contortionist isn't a mystical way to escape bonds — some reasonable way for the character to escape must exist.

Characters with Contortionist have knowledge of knots, restraint systems, methods of escaping from bonds, famous escapes and escape artists, and related subjects. They are able to tie and untie knots, squeeze their bodies into small spaces, and so forth.

ESCAPING RESTRAINTS

The best-known and most common use of Contortionist is to allow a character to contort his body so he can extricate himself from bonds, handcuffs, and similar restraints. Characters with Contortionist also know how to tie knots and apply restraints in such a way as to make escape less likely.

The Skill Roll to escape restraints is modified by the type of restraint used and how well the character has been restrained (see the Restraints Table). Restraints are applied "well" if put on the character by someone who knows how to do it properly (*i.e.,* has Contortionist or PS: Knot-Tying himself) and does so. (Alternately the GM can use the "Average" rating and have the two characters engage in a Skill Versus Skill Contest to determine whether the Average modifier is increased or decreased based on who wins the Contest.) Restraints are applied in an "average" fashion when put on the character by someone without special skills or experience, but who takes his time, pays attention to what he's doing, and does his best. Restraints are applied "poorly" if put on the character by someone who has no idea how to put them on, does not pay attention to the task, or otherwise does it improperly.

If a character's hands are bound behind his back, he can make an unmodified Contortionist roll to change "hands bound in back" to "hands bound in front" by contorting his bound wrists under his legs.

RESTRAINTS TABLE

	How Well Applied		
Type Of Restraint	Poorly	Average	Well*
Chains, strong/thick	-3	-4	-5
Chains, weak/thin	-2	-3	-4
Handcuffs, flexible	-3	-4	-5
Handcuffs, rigid	-4	-5	-6
Hand restraint systems	-6	-7	-8
Legcuffs	-3	-4	-5
Plasticuffs	-4	-5	-6
Rope, thin cord or plastic	-0	-1	-2
Rope, normal	+1	-0	-1
Straitjacket	-3	-4	-5
Thumbcuffs	-3	-4	-5
Wire	-3	-3	-4

*: Rather than use this modifier when the character applying the restraints also knows Contortionist, PS: Knot-Tying, or a similar Skill, the GM can have him and the victim engage in a Skill Versus Skill Contest (see text).

OTHER CONTORTIONIST MODIFIERS

Situation	Modifier
Using lubricant (oil, soap, butter, blood)	+1 to +3
Puffing up the chest	+1 to +2
Dislocating limbs (see text)	+3
Injuries from previous attempts	-1 to -2

Beneficial Modifiers

Not all modifiers to the Contortionist roll to escape restraints are negative. The use of lubricants (such as oils, soap, butter, or even the character's own blood) can add +1 to +3 to the roll, depending upon the type of restraint and the quality of the lubricant. Of course, lubricants will not help the character escape some restraints (such as straitjackets).

If a character "puffs up" (expands his stomach and chest while being tied), restraints such as ropes, chains, and wire will have some slack in them when he returns his stomach and chest to normal size. This provides a bonus of +1 to +2, and/or may mean the restraints are "poorly" applied. Someone restraining the character notices an attempt to "puff up" if he makes a PER Roll at -2 (Contortionist acts as a Complementary Skill). If the character being tied up has Acting, a successful Acting roll imposes a -2 penalty to the roll to detect puffing up.

Characters with Contortionist on at least a 14- roll also know how to dislocate limbs and joints (typically the shoulder, elbow, and finger joints) so they can more easily escape restraints. Deliberately dislocating a joint requires a successful EGO Roll, followed by a successful Contortionist roll. If the rolls succeed, the character takes 2d6 STUN damage (no defense) and receives a +3 bonus to all Contortionist rolls involving that limb (or hand) until he relocates the joint. If either of the rolls fail, the joint is not dislocated, and the character takes no STUN and receives no Contortionist bonuses; further attempts to dislocate that same joint are at -2 to both rolls per failed attempt. Relocating the joint requires an EGO Roll and causes another 2d6 STUN damage to the character. Until the character relocates the joint, he cannot use that limb or appendage in any way (or, at the GM's option, must make a DEX Roll at -4 each Phase to do so). Attacks which strike the dislocated joint or limb cause an extra +1 STUN Modifier (or +2d6 STUN for Normal damage attacks).



Breaking Bonds

In situations where a character prefers to break his bonds rather than slip out of them, Contortionist still helps him. For every 2 points by which his Contortionist roll succeeds he may add +1d6 to his STR (either normal STR, or STR from a Martial Escape maneuver) for purposes of breaking the bonds.

Example: *Xiu Kwan, a* lin kuei *assassin, has Contortionist 14-. A group of South China Sea pirates has captured him and tied him up with ropes. He decides to impress them by breaking his bonds. His STR is 20. He rolls his Contortionist roll and gets an 8. Since he made his roll by 6, he may add +3d6, so he rolls 7d6 to break the ropes.*

Injuries While Escaping

In some situations, such as when a character is tied up with wire or tight cords, the character may cut himself or rub his wrists or ankles raw while trying to escape. The GM must decide if this occurs, though it's most likely to happen if the character fails a Contortionist roll. In some situations, this type of injury could cause 1 point of BODY damage, but usually it's just painful without doing BODY damage. Such injuries impose a -1 to -2 modifier to further attempts to use Contortionist until they heal. However, as noted above, the blood may act as a lubricant that provides bonuses to the character's attempt to slip out of his restraints.

Locked Restraints

In some situations, a character's ability to contort his body is not, by itself, enough to let him escape — the retraint may have locks he cannot break or that are impossible to slip out of. Some handcuffs (particularly rigid varieties) and plasticuffs fit this description. In this situation, the character either (a) has to get the key somehow; (b) use Lockpicking on the lock (Contortionist can help him reach the lock, but he may suffer negative modifiers for positioning, lack of lockpicking tools, and so forth); and/or (c) cut the restraint somehow. Plasticuffs are fairly easy to cut with any knife or similar sharp objects, and some ropes can be worn through or cut through by rubbing them against rocks or reasonably sharp objects. Handcuffs and straitjackets, on the other hand, may be difficult or impossible to cut through.

Escaping From Grabs

A character with Contortionist can also try to escape constraints — Grabs, in other words — during combat. Any Phase after an opponent Grabs a character with this Skill, he can use Contortionist to help himself break out. When he tries to break free, he should make a Contortionist roll. If the roll succeeds, he adds +1d6 to his STR dice for every 1 point by which the roll succeeds (if he makes the roll exactly, at the GM's option he still may add 1d6 to his STR). Thus, a character who made his Contortionist roll by 4 would get to add 4d6 to his STR dice, only for the purpose of escaping the Grab. Using Contortionist this way takes no time (the character may take more time to improve his chances), but the character may only attempt it once per Phase.

Example: *Ogre Grabs the superhero Zigzag during a battle. Knowing his puny 10 STR will never overcome Ogre's might, Zigzag uses his Contortionist skill. He rolls a 9, making the roll by 6. He can now roll 2d6 (for STR) + 6d6 (for Contortionist) = 8d6. Ogre, with a 60 STR, rolls 12d6. The dice are thrown; Zigzag gets 8 BODY and Ogre gets 11. Pity.*

FITTING INTO NARROW AREAS

The other major use for Contortionist is to fit into small, narrow, and/or cramped spaces that ordinary humans cannot fit into — everything from small steamer trunks, to cracks between timbers in a collapsed mineshaft, to kitchen cabinets, to squeezing between jailbars. The accompanying text box lists the modifier for any attempt to fit into a small space.

If a character with Contortionist is in a collapsing structure (such as a building or mineshaft after an explosion), he may use Contortionist to find and fit into a protected area between portions of collapsing debris (for example, a pocket of air created by two beams that collapsed against each other and prop up other debris). It's up to the GM whether the character takes any damage while getting into this "safe zone," and what modifiers, if any, apply to his Contortionist roll.

Similarly, Contortionist can allow a character to reach an area or object most persons cannot. The character could fit his arm through a tiny grating to reach something on the other side, for example, or could contort his tied-up body to reach the lock on the back side of the straitjacket he's been put in (though he needs Lockpicking to open the lock). Modifiers in this situation should be determined by the GM; they will usually range from +0 to -3.

REMAINING STILL

Sometimes a character needs to remain *absolutely still* for long periods of time. Perhaps he's lying in wait for game animals (or to ambush an enemy) and doesn't want to give away his position, or maybe he's just found himself trapped in a monster's lair where the least little noise will wake the creature up. To remain absolutely still for 1 Turn requires an unmodified Contortionist roll; for each step down the Time Chart impose a -2 penalty. While remaining still a character can perform no other physical Actions (not even speaking), but he can still think, use Mental Powers, or the like.

NARROW AREAS TABLE

Size Of Area	Modifier	Example
91+% of character's size	+1	Small wardrobe
75-90% of character's size	+0	Steamer trunk, large
65-75% of character's size	-1	Steamer trunk, average/small
50-64% of character's size	-2	Kitchen cabinet, average
40-49% of character's size	-4	Kitchen cabinet, small
33-40% of character's size	-8	Jailbars
Smaller than 33% of character's size	Impossible	

The examples assume a human-sized character.

EQUIPMENT

Contortionist doesn't involve or require any equipment; it's purely a personal Skill.

POWERS AND CONTORTIONIST

Several Powers interact with Contortionist in unusual ways.

Body-Altering Powers

A character who can change his shape or size via Growth, Multiform, Shape Shift, Shrinking, or the like may be able to use that Power to escape restraints, Entangles, and the like without the need for Contortionist.

Entangle

The basic *HERO System* rules assume a character *cannot* use Contortionist to escape from an Entangle. This represents Entangles like glue bombs, ice blocks, sticky webbing, and magical energy fetters — no matter how a character squirms and contorts his body, he cannot get out of them by agility alone. His only resort is to try to smash out of them using STR, a Martial Maneuver with the Exert element devoted to "escape," or an appropriate attack. (Contortionist can add to his STR for these purposes, as described above.)

Characters can use Contortionist to escape Entangles with other special effects — rope, chains, handcuffs, wireguns, and the like — though it might be difficult. You can represent this with a Limitation, *Escapable With Contortionist*. For a -1 Limitation, a character can escape an Entangle by making a normal Contortionist roll. This might represent poorly-tied ropes, weak wireguns, or the like.

For a -½ Limitation, a character can escape an Entangle by making a Contortionist roll at a -1 to -3 penalty (the GM determines the appropriate penalty, based on special effects and the circumstances). This might represent normal handcuffs (see the example in the sidebar on page 168 of *The HERO System 5th Edition, Revised* rulebook), an average-quality wiregun, typical chains, or the like.

For a -¼ Limitation, a character can escape an Entangle by making a Contortionist roll at a -4 to -6 penalty (the GM determines the appropriate penalty, based on special effects and the circumstances). This might represent high-tech handcuffs, a quality wiregun, some limited or poor-quality types of glue bombs or ice blocks, tight and well-made chains, and the like.

In any case, using Contortionist to escape an Entangle normally requires a Full Phase. For ¼ more Limitation, this only requires a Half-Phase Action. For each ¼ less Limitation (or ¼ more Advantage), the character buying the Entangle can extend the time it normally takes to contort out of it by one step down the Time Chart (1 Turn, 1 Minute, and so forth). However, these are *average* times; the GM may modify them based on special effects, how much the character makes his roll by, the circumstances, common sense, dramatic sense, and other factors.

Characters can also escape some types of Entangles, such as chains, with Lockpicking rather than Contortionist (assuming the character can



reach the lock and has an appropriate tool or power to do the job). If so, simply change the Limitation's name to *Escapable With Lockpicking.* If a character can escape an Entangle with both Lockpicking and Contortionist (as with handcuffs), simply include both Skills in the Limitation's name; the Entangle doesn't get an additional Limitation because of this.

Stretching

As with the body-altering powers described above, Stretching (or Powers bought with the special effect of "stretchable, malleable body") may make Contortionist unnecessary. Indeed, a malleable body could be considered the ultimate form of contortionism — it's easy to get out of restraints or fit into small areas when one's body is as flexible as a rubber band!

CONSEQUENCES OF FAILURE

Typically, a failed Contortionist roll means the character cannot free himself or fit himself inside a narrow area. A badly-failed roll (by 4 or more) may indicate that the character has injured himself — sprained or dislocated some part of his body, for example. (The GM can roll on the Failed Acrobatics Rolls table on page 72 to determine what happens, if desired, but should generally cap the possible result at "Minor Injury.")

BASE TIMES

To escape from a Grab, Entangle, or other restraint used in combat requires a minimum of a Half Phase. The GM may require the character to take an entire Phase or more. If the character escapes from the restraint in a Half Phase, he of course has a Half Phase left in which to act. (See also the rules for Entangle, above.) If the character uses Contortionist to break his bonds, rather than simply slipping free from them, apply the standard rule on actions left to the character after breaking free (*HERO System 5th Edition Rulebook, Revised,* page 423).

For non-combat uses, such as escaping from handcuffs or other extensive restraints, or fitting inside small, narrow spaces, the Base Time is 1 Turn. At the GM's discretion, this may be increased for especially difficult feats.

SUBDIVIDING CONTORTIONIST

If appropriate, the GM can split Contortionist into two distinct Agility Skills: Escape Artist (used to escape from restraints and fit into narrow areas) and Rope Use (used to tie knots and perform other tasks with rope; often a Complementary Skill for Climbing).

CONTORTIONIST BY GENRE

Contortionist works the same in all genres.

Martial Arts

In Japan, the art of contorting the body is known as *tonjutsu.* When used by ninja or those trained by them, the ability to tie knots for maximum strength and so as to prevent escape, which can also be bought as PS: Knot Tying, is called *terinawajutsu* or *hojojutsu.*

Superheroes

Even characters with only minor metamorphosis powers sometimes have significant manipulatory control over their bodies. The *Contortionist* Skill can simulate this ability to slightly alter the bodies to fit into small spaces, dislocate various joints, and generally conform to whatever shape they wish without changing their actual form.

CONVERSATION

Type: Interaction Skill (roll: 9 + (INT/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

This Interaction Skill allows a character to extract information from people with careful conversation, and/or to be an entertaining conversationalist. In some contexts it has more specialized applications, such as conducting interviews.

Conversation is an Everyman Skill for all genres.

USING CONVERSATION

Using Conversation requires time (see *Base Times,* below) and a certain amount of attention and effort. Typically characters use Conversation to subtly "pump" a target for information without the target realizing what's going on. In other words, the character uses his skill at personal interaction and discussion to steer the conversation where he wants it to go, make the target feel "at ease" with him so he'll be more inclined to reveal confidences, and so forth.

For the standard use of Conversation — trying to get information out of someone without his knowing it — a successful roll indicates the character has done just that. Through a combination of deft wordplay, getting close to the target, and the like, he's learned what he wants to know. Furthermore, in most cases success in this situation means the victim doesn't even know he's divulged anything. He knows what he said, of course, but he doesn't realize he shouldn't have said it or that the character was actually trying to get him to reveal that information. (But sometimes the target of Conversation is using his own Conversation to get information, too....)

Some other uses of Conversation include:

Witty Conversationalist

In ordinary social situations a character can make a Conversation roll to be a particularly witty, intriguing, and sparkling conversationalist. Failure doesn't make him a bad conversationalist, just an average one (though a bad [-4 or worse] or Critical Failure might make the character look foolish or uninformed).

Although successful Conversation rolls indicate that a character presents himself well in conversation, in general you shouldn't substitute this Skill for roleplaying. If a character makes clever or stupid statements, the GM should apply modifiers to the roll. You should roleplay most conversations without using Conversation rolls.

Pushing Emotional Buttons

At the GM's option, after a character speaks with a person for a while, if he succeeds with a Conversation roll he can determine what topics the target would prefer to avoid or cause him emotional discomfort. Characters typically do this so they can then steer the conversation that way, putting the target at a disadvantage.

Interviews And Cross-Examination

The target of Conversation doesn't *have* to be aware that he's being subtly "grilled" for information. He may be perfectly aware that the character wants him to reveal something but determined not to reveal it. In that case the character's goal is to trick or persuade the target to spill the information. This most commonly occurs in two situations: interviews and cross-examination.

Some interviews are perfectly innocent and legitimate attempts to gather information the interviewee doesn't mind revealing (in which case no roll is needed, except perhaps a PS: Reporter roll or the like to ensure that the character remembers to ask all the right questions). In other cases the interviewer wants to elicit information the interviewee prefers to keep secret or otherwise wants to "ambush" the interviewee with an embarrassing revelation or the like. In this case, the interviewer makes an Conversation roll and the target attempts to resist (see page 67). If the interviewer succeeds and the target fails, the interviewer convinces or tricks the interviewee to reveal private information or to put himself at some sort of disadvantage. If the interviewer fails or the interviewee resists, the interviewee sees what's coming and successfully avoids the "trap" or refuses to disclose the secret.

When an attorney cross-examines a witness on the stand, the attorney makes a Conversation roll and the target attempts to resist (see page 67). If the attorney succeeds and the target fails, the attorney causes the target to either (a) reveal the information even though he didn't want to (perhaps by angering him into revealing something, or catching him in a logic trap), or (b) reveal that he knows something relevant (at which point the judge can compel the witness to say what it is). If the attorney fails or the target resists, the target gets the best of the attorney and doesn't say anything damaging. (Outside of the courtroom this use of Conversation may not be as successful since there's no way to "force" the target to talk once he realizes the character's gotten the better of him verbally.)

MODIFIERS

A character must know a language in common with his target or he cannot use Conversation on that person at all. If the two share only "basic conversation" level of fluency, impose a -3 or -2 penalty on the Conversation roll; for "fluent conversation" the penalty is -1; for any higher level of fluency there's no penalty.

Additionally, the character and his target have to be able to hear one another clearly or Conversation becomes much more difficult. The GM imposes any Hearing PER Roll penalties on the Conversation roll. In short, a quiet coffee bar is a better place to use Conversation than a loud nightclub or party.

The main question for the GM to consider when evaluating an attempted use of Conversation is how concealed, secret, or personal the requested information is. Getting someone to divulge his name is usually pretty easy... unless he's on the run from the law and desperate to conceal his true identity. And attempts to get spies and government officials to reveal top secret information to someone they've just met are almost certainly doomed to failure. The Conversation Modifiers table has guidelines for "secrecy penalties" to Conversation rolls.

The GM should also consider the number of targets involved. Ordinarily a character uses

Conversation against a single target at a time, but sometimes he has to talk to people in groups. Usually this imposes a negative modifier on the Conversation roll — a cumulative -1 penalty for every x2 persons (see the Conversation Modifiers table) — because if any member of the group starts to give something away, another member realizes what's going on and stops him. However, in some circumstances being in a group of "friends" may make the targets (or at least some of them) more socially comfortable and willing to talk, in which case the GM can convert the penalty into a bonus.

Complementary Skills often help with Conversation. If the character wants information that pertains to another Skill, such as trying to get an engineer to reveal details of a secret electronics project, that Skill serves as a Complementary Roll — the character's knowledge of the subject helps to convince the target he knows what he's talking about, and the character's background in the subject tells him what questions to ask or topics to raise. Other Interaction Skills, particularly High Society and Streetwise (when dealing with the upper class and the criminal class, respectively), can also be Complementary. Persuasion and Seduction are almost always Complementary, since they predispose the target to like the character and/or go along with what he seems to want (even if the target does so subconsciously).

CONVERSATION MODIFIERS

Circumstance	Modifier
Secrecy/Confidentiality Of Information Sought	
Public/Nonconfidential	+0
Non-Public/Personal	-1
Confidential/Sensitive/Highly Personal	-2
Classified (Security Clearance (1+))	-4
Secret (Security Clearance (5+))	-6
Top Secret (Security Clearance (7+))	-8
Language	
Character/target do not have a Language in common	Cannot use Conversation
Character/target speak a common Language with "basic conversation"	-2 to -3
Character/target speak a common Language with "fluent conversation"	-1
Multiple targets	
1 target	-0
2-3 targets	-1/+1
4-7 targets	-2/+2
8-15 targets	-3/+3
...and so on	

EQUIPMENT

Conversation doesn't involve equipment; it's a purely personal Skill. But buying the subject an alcoholic beverage or giving him small gifts (such as a cigarette) may make him more inclined to talk.

POWERS AND CONVERSATION

Careful use of Telepathy with the +20 "target doesn't realize character is reading is mind" modifier to the Effect Roll can eliminate the need for Conversation, or form the basis of a Conversation-style "super-skill." Similarly, a deft touch of Mind Control might make the target of Conversation more inclined to open up and reveal secrets.

CONSEQUENCES OF FAILURE

If a character fails a typical Conversation roll, the target usually realizes the character is subtly "pumping" him for information — so he stops talking. If the character fails the roll badly (by 4 or more), the target may realize what's going on in time to feed the character false information, or perhaps to get a bonus to his own Conversation roll to turn the tables on the character and surreptitiously learn something from him.

However, that's not the only possible outcome for a failed Conversation roll. As with any Interaction Skill, the GM can interpret the failed roll in dramatically appropriate ways to represent the nature of the social situation involved. Some possible other outcomes include:

■ the character horribly embarrasses himself by making some sort of conversational *faux pas* (possibly resulting in penalties to some Presence Attacks against the target, the acquisition of a mild *Reputation* Disadvantage, or the like)

■ the character's conversation is so poor that he sours a friend, makes a Contact less willing to help him, or the like. To put it another way, he puts himself at a short-term temporary social disadvantage with the target (and perhaps the target's friends).

■ the character says something that deeply offends one or more of the people he's talking to (with the same results as "embarrasses himself," above, but possibly of worse or longer-lasting effect)

BASE TIMES

Using Conversation takes time, since even a casual conversation tends to last longer than combat. In most cases a Base Time of 1 Turn or 1 Minute would be the absolute minimum, and 5 Minutes or longer isn't out of the question if the character needs to explore a broad topic or wants to get information the target strongly prefers not to reveal.

SUBDIVIDING CONVERSATION

Conversation already has a fairly limited scope and thus probably doesn't need subdividing. However, GMs in campaigns featuring lots of reporters or lawyers might want to turn Interviewing and Cross-Examination into one or two separate Interaction Skills. Conversely, in games with little social interaction, GMs could combine Conversation, Persuasion, and Seduction into one Skill.

CONVERSATION BY GENRE

Conversation works the same in all genres.

Fantasy

A mystic with Conversation might notice details of speech and body language that indicate someone is possessed, driven mad by forbidden lore, or otherwise not himself anymore. Creatures that impersonate human form may also give themselves away through subtle conversational clues.

CRAMMING

Type: Intellect Skill (roll: N/A [see text])
Cost: 5 Character Points; may be purchased multiple times (see text)

This Skill allows a character to acquire a basic understanding of a non-combat Skill quickly. It's classified as an Intellect Skill, but doesn't feature an INT-Based Roll. It costs 5 Character Points for the ability to Cram one Skill at a time, as described below; a character may buy it multiple times so he can Cram two or more Skills simultaneously.

To use Cramming, a character needs two things: time to study the Skill; and access to learning resources.

TIME TO STUDY

First, a character needs time to study the Skill in question — usually several hours, and possibly more. At a minimum this typically means ½d6+1 hours, but it depends on the complexity of the subject, as indicated in the Cramming Study Time table. The GM may adjust the suggested Base Times as he sees fit to reflect study conditions, the nature of the subject, and other factors.

Speed Reading, Eidetic Memory

The Talents *Eidetic Memory* and *Speed Reading* may reduce the time it takes to Cram a Skill, but this depends on the Skill the character's trying to Cram and the learning resources he has. Assuming book study (or the like) is the method of Cramming, a character with Speed Reading can typically cut his Cramming time at least in half, and possibly by more (but with a minimum study time of one-fourth the listed Base Time, unless the GM rules otherwise). Eidetic Memory isn't quite that helpful — it can only reduce the needed time by as much as about 25% (say, 4d6%). But Eidetic Memory is an excellent justification for the character spending Experience Points to buy the Crammed Skill permanently, if he wants to. (The GM might even choose to allow the character to spend saved Experience Points in mid-game to do this.)

The Research Skill

If a character succeeds with a roll using the optional new *Research* Skill (page 371), he reduces the time needed to Cram a subject by 10% per point the roll succeeds by (to a maximum of 50%, or half the time). If the character also has Speed Reading or Eidetic Memory, the Research reduction applies *after* those reductions are applied. If the roll fails; he receives no reduction; if it fails badly (by 4 or more), increase the time required to use Cramming by 50% or more.

At the GM's option, if a character with Research succeeds with his roll by 3 or more, he can increase his roll with the Crammed Skill by +1 (though Skill Levels still cannot apply). For a Critical Success (or perhaps even success by half), he can increase it by +2. If the roll fails, the character doesn't gain any boost to his Crammed Skill; if it fails badly (by 4 or more), reduce his Crammed Skill's roll to 7-.

ACCESS TO LEARNING RESOURCES

The character also needs something to learn *from.* Normally this means a library, computer datafiles, or another person who knows the Skill and gives the character a crash course in it. Depending on the complexity of the subject, a single textbook might suffice, or the character might need access to a very advanced library or highly-qualified instructor (*i.e.,* someone who not only knows the Skill but has the Skill *Instructor* [page 362]).

USING CRAMMING

After using Cramming to study his chosen subject, a character acquires a Familiarity (an 8- roll) with the Skill, or basic conversation (1 point) in a Language, or any 1-point Skill (such as a TF, or with the GM's permission a WF). (Skill Enhancers do not affect this, or increase the roll, nor does knowing a Language via Cramming gain the character any other Languages through the Language Familiarity Table.) He can use that Skill for the duration of the adventure. He cannot increase his 8- roll with it in any way (not even Overall Skill Levels, though the GM can apply modifiers if desired) and he forgets what he's learned once the adventure ends. (Of course, a character who wants to acquire the learned Skill permanently may spend Experience Points to do so.)

Typically characters use Cramming during an adventure to acquire highly-specialized knowledge or information they need. For example, if a group of commando PCs plans to raid a building owned by terrorists, one of them who has Cramming could use it to learn KS: Terrorist Building Floorplans 8- so he won't get lost during the raid. With the GM's permission, a character can begin a game session with a Skill already Crammed.

A character isn't necessarily limited to using Cramming only once per adventure or game session. Assuming sufficient time to study and access to the appropriate learning resources, a character could Cram a particular Skill, use it for part of the adventure, and then Cram some different Skill for use later in the adventure. (Of course, if he does this, Cramming the second Skill automatically causes him to forget the first Crammed Skill.) As mentioned above, characters can purchase Cramming multiple times, allowing them to Cram for more than one Skill per adventure and use both of them at the same time (each has to be studied separately, though).

CRAMMING STUDY TIME

Complexity Of Subect	Base Time	Examples
Very Complex	2d6+1 Days	Galactic history; quantum physics
Complex	1 Day	World history; basics of a complex language
Average	½d6+1 hours	History of a major nation (*e.g.,* the US, Great Britain); basic physics; basics of most languages
Simple	1 Hour	History of a minor or young nation
Very Simple	20 Minutes	History of a single year

Speed Reading, Eidetic Memory, and the *Research* Skill may modify the listed Base Times, as discussed in the text.

Cramming is particularly useful in conjunction with Disguise because it can add a dimension of believability to a disguise. The character can choose a subject the disguise identity should know about and Cram that subject so he can make conversation about it if someone questions him. This is particularly useful when the character is attempting to imitate some real person so he can infiltrate an organization or base.

CONVERTING CRAMMING TO A STANDARD INTELLECT SKILL

Cramming has an unusual cost structure, and that may not suit some GMs. If you desire greater uniformity, you can convert Cramming into a standard Intellect Skill: for 3 Character Points, characters buy an INT-Based Roll in it, and every +2 Character Points buys a +1 to the roll. To use this form of Cramming a character has to succeed with a Skill Roll; if he fails, he hasn't Crammed the desired Skill and can't use it. Repeated attempts to Cram a Skill are possible, subject to the standard rules for repeated use of a Skill. At the GM's option, if a character scores a Critical Success on his Cramming roll, he Crams the desired Skill with a 9- roll instead of 8-.

OPTIONAL EXPANDED CRAMMING RULES

The following optional rules expand the scope and usefulness of Cramming, primarily by allowing for rolls greater than 8- (which some players consider a dissatisfyingly low roll for use in the game). The GM should evaluate them carefully before using them in the campaign, since they may pose a significant threat to game balance.

Using these rules, a character can buy the ability to Cram a Skill at a much higher level of proficiency (though this requires more time). The accompanying Optional Cramming Table lists the cost, the highest possible roll the character can acquire with a studied Skill, and the study time required to learn the Skill to that level.

Other standard Cramming rules apply when appropriate. For example, a character using these rules can only learn non-combat Skills, cannot increase his roll in any way, and forgets the learned Skill at the end of the adventure.

A character using these rules can choose not to learn a Skill as thoroughly as he possibly could — perhaps because he's pressed for time and can only learn so much. For example, a character who's paid 20 Character Points for Cramming (13- possible maximum roll) could choose to Cram a Skill only to 11-, using the time listed for that level in the table. This does not allow him to Cram a second Skill at the same time, but at the GM's option if the character has more time to study later on, he can improve his 11- roll to 12- or 13-.

Optional Application Of Skill Levels

Alternately, instead of altering the cost structure of Cramming to allow for higher rolls, the GM can let characters apply Skill Levels to Crammed Skills. The GM needs to consider two things.

First, he has to decide what types of Skill Levels can add to a Crammed Skill. Some possibilities include: only 10-point Overall Skill Levels; only Overall Skill Levels and 8-point "All Noncombat Skills" Levels; any appropriate type of Skill Level; only special *Cramming Skill Levels* that cost 5 Character Points each and only add to Crammed Skills. The more types of Skill Levels that can apply, the cheaper it becomes for characters to easily gain access to high-roll Skills — and often Skills specifically chosen for their high degree of usefulness in a particular adventure.

Second, he must determine what limits, if any, exist on increasing Crammed Skills' rolls. In other words, is there an upper limit to the Skill Roll a character can achieve with a Crammed Skill this way? "No limit" is a possibility, especially if buying Skill Levels for Crammed Skills is expensive; otherwise 10-, 11-, and 12- are all good choices for a "ceiling" on Crammed Skill rolls.

EQUIPMENT

Cramming doesn't involve or require any equipment (other than learning resources, perhaps); it's a purely personal Skill. However, it's often used to build equipment. Computers and similar devices that have the capacity to input and then access data might buy Cramming to represent that ability.

BASE TIMES

The time required to Cram a Skill is indicated in the Cramming Study Time table. The time required to use a Crammed Skill depends on the Skill.

SUBDIVIDING CRAMMING

Cramming has such a limited purpose that splitting it up into multiple Skills probably isn't necessary. If the GM's worried about potential abuse, he should consider making characters by Cramming by type of Skill (*i.e.,* KS, PS, SS, Language, Other). That way a character with Cramming (Language) can't learn a KS or PS; all he can Cram is Languages.

CRAMMING BY GENRE

Cramming works the same in all genres.

OPTIONAL CRAMMING TABLE

Cost	Maximum Effect	Base Time
5	8- roll 1 point with a Language Any 1-point Skill (such as a TF)	Base Time from Cramming Study Table
8	9- roll	1.5 times Base Time
11	10- roll	2 times Base Time
14	11- roll 2 points with a Language Any 2-point Skill (such as a TF)	3 times Base Time
17	12- roll	4 times Base Time
20	13- roll 3 points with a Language	5 times Base Time

13- or 3 points in a Language is the maximum effect a character can obtain using this rule.

THE LATEST DATA

The information in this chapter comes from various sources available to the general public as of mid-2006, and is current as of that time. However, the field of criminalistics often advances rapidly, so it's possible that some of this information will become outdated or invalidated as time goes on. Players and GMs who are interested in being as accurate as possible are encouraged to do their own research.

LOCARD'S EXCHANGE PRINCIPLE

Much of criminalistics is based on a scientific law called *Locard's Exchange Principle,* which states that "whenever two objects come into contact, a transfer of materials occurs." This transfer may be minute, but with proper equipment and training a criminalist can find the transferred materials, analyze them, and derive information from them.

CRIMINOLOGY

Type: Intellect Skill (roll: 9 + (INT/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

A character with this Intellect Skill knows how to look for clues, dust for fingerprints, analyze evidence, examine criminal records and files, do ballistics tests, and otherwise investigate crimes and crime scenes (and the evidence left at them). In short, he's capable of doing all sorts of "detective work" — both the type done in the field and the type done in the crime laboratory. (Though he can't examine and autopsy bodies; that requires Forensic Medicine.) The procedures he performs and investigations he conducts can tell him which gun fired the bullet that killed someone, where dirt on a tire came from, and who touched the murder weapon. The character can discern many other details of a person's identity, origin, habits, and recent whereabouts, as discussed below.

A character with Criminology knows about and can perform the many tests associated with criminalistic analysis and the scientific principles behind them (he doesn't have a full Science Skill in any field, though he often buys SSs for use as Complementary Skill rolls and to indicate the depth and breadth of his knowledge). He can identify and use equipment commonly found in a crime lab. He knows how to preserve a crime scene and evidence, preserve evidence for later analysis, and keep records regarding evidence. He knows other people in his field, particularly famous ones and what they're known for.

Characters with Criminology also know something about the behavior patterns and *modus operandi* of criminals, criminal psychology, and so forth (this is criminology in the classic sense of the word; gathering and processing evidence is more properly referred to as *criminalistics*). They can prepare simple criminal profiles, compare the methods and habits shown at one crime scene to another, and so forth. Again, this isn't equivalent to a Science Skill (much less Streetwise), but for gaming purposes it's often close enough.

Complementary Skills play a big role in Criminology. In addition to the specialized ones listed in the sections below, Skills like Bureaucratics are Complementary for tasks that involve examining records and the like. Area or City Knowledge and some Sciences (such as Pharmacology or Geology) act as Complementary Skills for certain facts. Deduction, Streetwise, and Science Skills like Psychology may be Complementary when characters use Criminology to analyze a criminal's behavior, methods, and purposes.

Criminology Subfields

Here are some of the types of evidence characters can gather and analyze with Criminology and what they can learn with the Skill.

ARCHAEOLOGY

At old crime scenes, sometimes archaeological procedures and techniques are useful to recover and preserve evidence. Forensic archaeological investigations may involve forensic anthropology (see page 182) as well, since bones are often the only remains of the victim. SS: Archaeology is a Complementary Skill to Criminology for purposes of finding evidence at older crime scenes.

ARSON AND EXPLOSIONS

Characters may often find themselves investigating suspicious fires or explosions.

Arson

Criminalists and fire marshals must sometimes investigate a fire to determine its cause and origin — in other words, to discover if someone deliberately set it (usually as a form of insurance fraud, or as an attack on the property's owner). SS: Arson/Explosion Investigation covers this field and serves as a Complementary Skill to Criminalistics.

Characters should examine an arson scene as soon as possible after the fire is extinguished. First they must locate the fire's point of origin. Fire tends to move upwards, so the investigation usually starts at the lowest point at which there's evidence of burning. Factors such as the wind and building collapse can alter the usual pattern of burning. A series of random fires throughout a building, or evidence of *accelerants* (substances such as kerosene used to spread a fire), also known as "streamers," often indicate arson.

Once the character locates the fire's point of origin, he protects it and photographs it. An electronic "sniffer" can detect the residue of any accelerants, since such chemicals usually do not burn up completely. The character can then use a gas chromatograph to identify the accelerant. Normally, not even intense firefighting efforts obliterate all useful forensic evidence, but at the GM's discretion, they could impose a -1 to -3 penalty on a character's Criminology roll. Similar penalties result if a character waits too long to investigate a fire.

Inexperienced arsonists often burn themselves badly. A quick call to the local emergency rooms may help locate such an arsonist.

Explosions

Investigating explosions is similar to investigating arson. Demolitions and SS: Arson/Explosion Investigation are Complementary Skills for investigating explosions.

Explosives are classified as "low" or "high" explosives; the distinction depends on the speed at which the substance "decomposes" (*i.e.,* explodes). Black powder and smokeless powder are a low explosives; dynamite, TNT, and RDX (plastic explosive) are high explosives. Low explosives are usually set off by a flame; high explosives by a primer (a small, ultrasensitive

explosive device) contained in a blasting cap and triggered by an electric charge.

The investigator should examine the scene of an explosion as soon as possible, before the evidence is obliterated. Bombing investigations generally focus on four separate areas. The first is to examine the components of and residues left by the bomb and try to link them to the person(s) who built the bomb. Explosives almost always leave traceable residues in the crater and surrounding areas. Microscopic examination of materials from the scene lets characters find these unexploded particles, which they can then identify with a chemical color test. Explosions also leave distinctive marks, called pitting and cratering, in metals; and the direction and type of soot on the walls is likewise important. Remnants of the materials used to construct the bomb (such as the metal fragments created by a pipe bomb) are another type of explosion evidence. Also, the faster (stronger) an explosive is, the more damage it does, so the extent of the damage can tell investigators what type of explosive was used.

Second, investigators can compare the bomber's "signature" to known signatures. Each bomber tends to have his own particular method or style of making bombs. Even if they know other ways to make bombs, they usually keep using certain techniques that they favor. SS: Psychology/Criminal Psychology can act as a Complementary Skill to Criminology for purposes of determining a bomber's "signature" and what it might mean. (Of course, a highly-skilled bomber in an adventure story might vary the types of bombs he uses, just to confuse the characters.)

Third, investigators look for evidence of items associated with a bomb, such as the vehicle or package it was carried in, and try to link those with the bomber. They also interview witnesses, since the color and shape of an explosion can provide clues.

Fourth, investigators look into the motive for the bombing. They try to find out who had a reason to set off a bomb in this particular place, be it a disgruntled neighbor, a business enemy, a fanatical terrorist, or someone else.

BLOOD

Blood samples and stains can be extremely important clues. They can help identify murderers and show what happened at a murder scene. The study of blood (and other body fluids) is known as Serology. SS: Serology serves as a Complementary Skill to Criminalistics.

The basic steps in a blood investigation are these:

- is it blood?
- if so, is it human blood?
- if so, what are its characteristics (*i.e.,* whose blood is it)?

Special chemical tests provide the answers to these questions.

Characters should gather blood samples while the blood remains as fresh and pure as possible. As blood dries and ages, it gradually becomes more and more difficult to determine its characteristics, because the red blood cells rupture. Impurities can also occur when blood mixes with other substances, such as dirty water. However, in some situations the age or purity of blood is less important (for example, the precipitin test, described below).

Characters can detect "occult" blood stains — those which are hidden, too small to be seen by the naked eye, or have been cleaned up — with chemicals such as *luminol* and *fluorescein.* Luminol reacts to blood by creating a blue-white to yellowish-green light for about 30 seconds after exposure; this light is visible to the naked eye and should be photographed before it fades. Fluorescein works similarly, but is only visible under ultraviolet light. Even well-cleaned crime scenes usually retains microscopic traces of blood which become very visible when treated with these substances — luminol, for example, can detect blood in dilutions as small as 1 in ten million.

Identifying Blood

Determining that a sample is in fact blood is usually a simple matter — the examiner uses a chemical test, such as a catalytic color test. In game terms, this requires a Criminology roll, usually with a +1 to +3 bonus. The GM may reduce the bonus to +0 if the sample is contaminated, aged/putrefying, or otherwise difficult to work with.

After identifying a sample as blood, the examiner has to confirm that it's human blood and not animal blood. Several different tests, including the precipitin test, can provide this information. Unlike the catalytic color test, the precipitin test generally isn't affected by the age or purity of the blood sample, so a Criminology roll at +1 to +3 is enough to perform it properly.

Blood Characteristics

Scientists identify blood by its "type." The most common blood typing system is the A-B-O system, but more than 15 others, such as ADA, M-N, and Rh, are also used. Serologists can also identify certain enzymes and proteins, known collectively as "genetic markers," which exist in blood; these are much more reliable than simple blood types. Blood cannot as yet be "fingerprinted," *i.e.,* matched to a specific individual, except through DNA typing (see page 148). But by determining a blood sample's type in each of the classification systems, and identifying the genetic markers, a serologist can establish what percentage of the population has that specific blood type. If a suspect has that type, that fact is of some evidentiary value — the lower the percentage, the greater the likelihood that the suspect is the perpetrator. (Theoretically, if all genetic markers were present and could be positively identified, the odds of two people having the exact same "profile" of blood characteristics would be about one in 1.3 billion; however, many characteristics are obscured or destroyed as blood ages and dries out.) Another way to further individualize a blood sample is to analyze the blood enzymes in it; this method can identify the blood by racial type.

NON-SECRETOR

A character who wants to be a non-secretor regardless of the GM's general ruling can pay Character Points for the privilege:

Invisibility to Detect Blood Type, Reduced Endurance (0 END; +½), Persistent (+½), Inherent (+¼) (22 Active Points); Always On (-½), Only Applies When Someone Tries To Detect Blood Type From Other Bodily Fluids (-1). Total cost: 9 points.

Sometimes a criminalist won't have a blood sample, but will have a sample of some other body fluid (for example, saliva left on the rim of a glass or in a bite mark on the victim). If a person is a "secretor," then an analyst can determine his blood type from his other bodily fluids, such as saliva and semen. Approximately 80% of the populace are secretors. (The GM should assume all characters are secretors unless he has reason to rule otherwise.)

As mentioned above, the fresher and purer a blood sample, the easier it is to work with. Red blood cells rupture as blood dries and ages, making analysis more difficult; impurities in a blood sample can also cause problems. In some situations, characters can use a technique known as electrophoresis on dried blood to separate it into its component parts (including DNA) for analysis. Additionally, a test called the absorption-elution technique can type blood samples up to eleven years old, but it's more complicated and difficult than standard tests. Depending upon the age and purity of a blood sample and the equipment available to a character, the GM should assign a -1 to -5 penalty to a character's Criminology roll to analyze it.

Transfusions sometimes obscure blood test results. If a suspect from whom a blood sample is taken has had a blood transfusion within the 60-day period prior to the taking of the sample, obtaining a valid sample is not possible. A clever *Dark Champions* criminal might use this fact to his benefit.

Blood Splatters

Besides its capacity to help identify an offender, blood can also provide information based on the way it stains and splatters the crime scene. For example, a large pool of blood at the crime scene often indicates the victim was alive for some time after the wound was inflicted, since after death the heart stops pumping blood through the body (and out of the wound). On the other hand, some fatal wounds may cause little or no blood to leak out of the body.

The size and shape of a blood pattern can indicate which direction the blood came from, what angle it hit the surface at, where the attacker stood and what hand he wielded the weapon with, and other information that helps a criminalist reconstruct the events of a crime. Analysis of blood patterns is an extremely complex process; at his option, the GM should assess Criminology roll penalties of -3 to -6 unless a character has SS: Bloodstain Interpretation as a Skill (which also serves as a Complementary Skill).

Blood Tests

In some cases, characters can test a person's blood to determine if he's taken drugs or was poisoned. Tests can detect amounts of foreign substances as small as one nanogram (one billionth of a gram) per milliliter of blood, depending on the substance and the test used.

COMPUTER FORENSICS

Computer forensics involves obtaining lost, encrypted, or deleted data from intact computer storage media (such as hard drives and CD-ROMs), or retrieving any sort of data from broken or damaged storage media. It's a function of the *Computer Programming* Skill, not Criminology; see page 126.

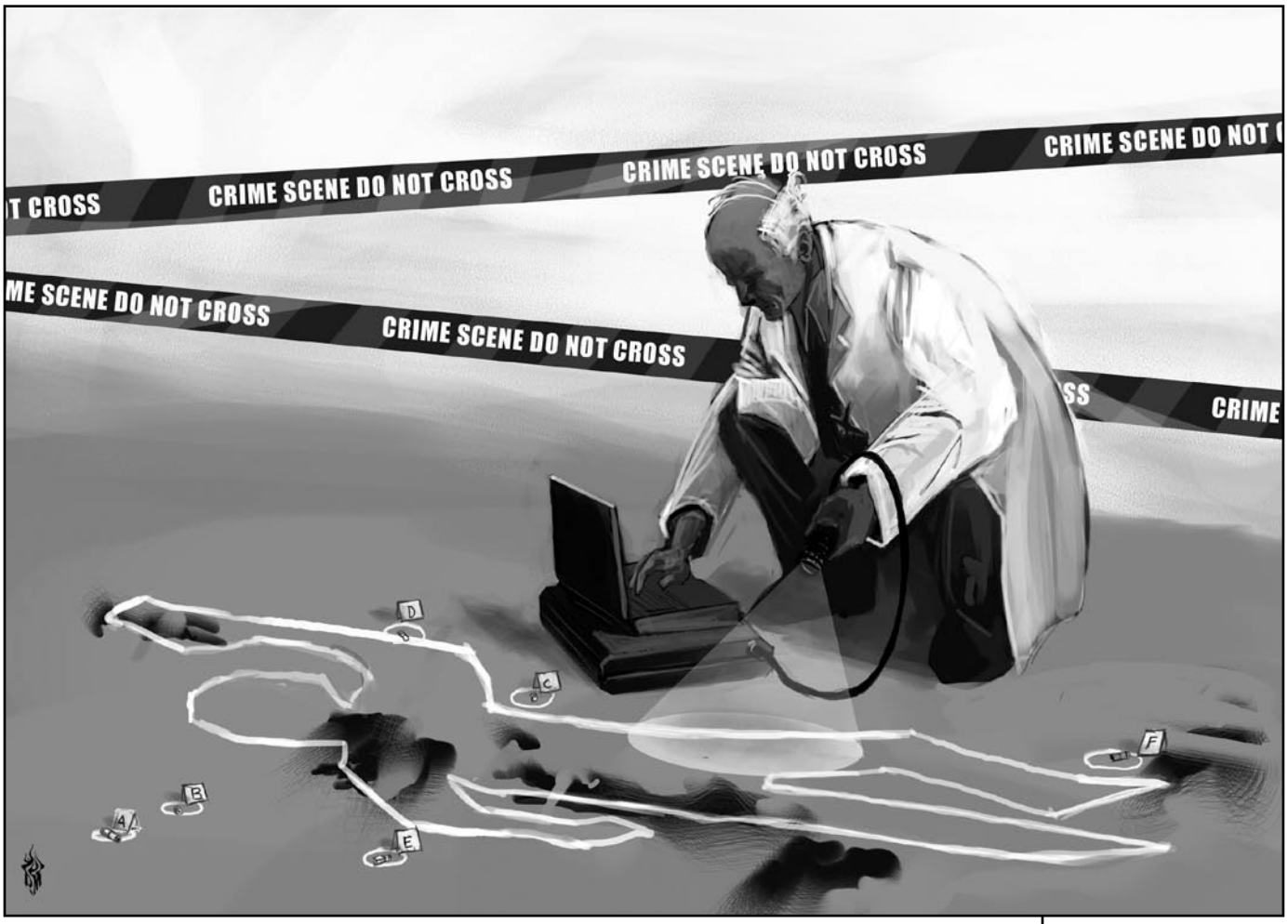
DNA "FINGERPRINTING"

DNA, deoxyribonucleic acid, exists in the nuclei of living cells. Even a tiny sample of tissue (for example, a drop of blood, the root of a hair, sweat, saliva left on the back of a stamp or other object that's been licked, or even excrement) contains DNA. Each person's DNA is unique (unless he has an identical twin) — and unlike blood characteristics, DNA does not deteriorate with age unless it's exposed to radiation (such as sunlight). This provides forensic scientists with an important tool.

Modern science has not yet reached the point where it can quickly and easily identify each person's DNA with absolute accuracy, but it can determine the frequency with which a particular sample of DNA occurs in the population with such accuracy (such as one in one hundred million persons) that it suffices for the purposes of forensics. The FBI has a database, CODIS (Combined DNA Index System), that lets scientists compare DNA samples from crime scenes to samples from known sex offenders and other violent criminals. Analysis of DNA can also sometimes reveal its general ancestry (*e.g.,* European, Asian, or African-American). Researchers hope to develop systems that can determine hair color, and perhaps even facial characteristics, from DNA.

There are several major methods of DNA typing. The first is *restriction fragment length polymorphism* (RFLP), which requires a fairly large and fresh sample to analyze. In this process, a technician uses restriction enzymes to cut chromosomes into hundreds of DNA fragments, some of which contain "tandem repeats" (sections of DNA in which the bases that form DNA repeat many times). He then sorts the fragments through electrophoresis and transfers them onto membranes. Treating the membranes with radioactive "probes" allows him to identify the fragments. By using multiple probes, the technician can reduce the frequency of occurrence of the sample to the point where it occurs in frequencies estimated to range from one in one hundred million people to one in 30 billion people. But while highly accurate, the process can take as much as three to twelve weeks.

Another major technique is *polymerase chain reaction* (PCR). PCR works on very small samples (as small as one-billionth of a gram of DNA, such as might be obtained from the saliva on a cigarette



butt or envelope), and on samples years (even decades) old. The technique makes the small pieces of DNA found as part of crime-scene evidence replicate until they create millions of copies of the original DNA molecule, which a technician can then compare to a sample taken from the suspect. However, this technique produces a frequency of occurrences far greater than that of RFLP; the best results obtainable can only narrow the occurrence down to one person in one thousand. But although it's not as accurate, the PCR technique only requires a few hours to perform.

Mitochondrial DNA testing (mtDNA), or DNA sequencing, types DNA by analyzing DNA located outside the nucleus of the cell. These procedures allow scientists to obtain DNA from samples that aren't necessarily susceptible to genomic DNA testing, such as hair shafts, bones, teeth, and extremely old tissue. Additionally, because mtDNA is maternally inherited, every person in the same maternal lineage should have an identical mtDNA sequence. Scientists thus can use it to evaluate the relatedness of two persons, and can gather comparison samples from any of a suspect's maternal relatives.

Scientists are working to develop other DNA typing methods and technology. Some anticipate the day when criminalists in the field can use suitcase-sized, or even computer chip-sized, DNA testing equipment to cheaply and easily analyze even the tiniest samples of DNA within minutes and with great accuracy.

DOCUMENTS

Criminalists analyze documents to determine who wrote them, whether they're authentic or have been altered, and so forth. Characters who have the Skill *Forgery (Documents)* can use it as a Complementary Skill when working with documents, or they can buy SS: Document Analysis.

With handwritten documents, Criminology allows a character to determine if a particular individual wrote that document, provided he has two sufficiently lengthy writing samples available for comparison. He can identify typewriting as coming from a particular typewriter by comparing the wear and tear on the typewriter's letters with that shown by the typed letter. Text printed out by a computer printer can often be identified by printer type, but not necessarily as coming from a specific printer. Examination of photocopies and comparison of them to a particular photocopier sometimes allows the examiner to determine if the copy was made on that machine, or on a specific model or class of machines.

Scientists can examine documents which have been altered or erased for microscopic traces of such activity. Two different pens will leave different striae (microscopic uninked lines) on the paper. If a forger uses another type of ink (to alter or blot out part of the document), an analyst can identify and read the different inks via infrared or ultraviolet photography or by determining the chemical composition of the different inks. Infrared photography

can sometimes also be used to determine what's written on burned document fragments, and there are many other techniques criminalists can employ to restore/read crumpled or damaged paper or obliterated inks.

Depending on the state of examined documents, characters may receive modifiers to Criminology rolls. Reasonably intact documents may provide bonuses of +0 to +2, while trying to read burned document fragments or restore a badly-damaged piece of paper might entail a -2 to -5 penalty.

The Page Beneath

Forensic scientists have several techniques for determining what was written on a sheet of paper by examining the indentations left on the piece of paper below the written-on sheet. Television detectives usually do this by shading the piece of paper with a pencil, but in the real world this method is more likely to destroy evidence than gather useful information. Proper methods include photographing the paper under oblique light or using an electrostatic detection apparatus (ESDA). ESDA can sometimes recover indentations from four or more pages below the page that was written on, but doesn't work with thick cardboard, paper that's been soaked with fluid, or papers examined for fingerprints in certain ways.

In game terms, have a character using ESDA make a Criminology roll at -1 per page below the page written on to recover usable indentations; for oblique-light photography, apply a -2 (or greater) penalty, but this only works for the first page below the page written on. The low-tech "shade the piece of paper with a pencil" method requires a Criminology roll at -3; it only works on the first page below the page written on, and if the roll fails it's not possible to recover the indentation evidence using other methods.

Forensic Linguistics And Graphology

Two disciplines related to document analysis are forensic linguistics and graphology.

Forensic linguistics is the science of determining information about someone based on the structure and word choice of a written document (such as a ransom note). A trained examiner can often determine the writer's age, gender, race, religion, level of education, and nationality this way, and sometimes his profession or other background details (such as whether he has been in the military). SS: Forensic Linguistics serves as a Complementary Skill (some GMs may require characters to have this SS before even attempting such a task).

Graphology, or handwriting analysis, is the science of determining information about someone by interpreting their handwriting. Based on the size, shape, slant, spacing, placement, and other characteristics of the letters in someone's handwriting, a graphologist can make determinations about the writer's personality and mental state. More concrete information, such as age, race, and gender, cannot be determined from handwriting, however. Characters must buy SS: Graphology if they want to be able to interpret handwriting; Criminology does not provide this ability.

DRUG IDENTIFICATION

Criminalists can identify drugs by means of simple chemical color tests (SS: Chemistry or SS: Pharmacology are Complementary Skills). For example, certain chemicals turn purple when exposed to heroin or orange-brown when exposed to amphetamines, turn marijuana purple, or change colors three times when exposed to cocaine. Police officers can perform some of these tests in the field using kits. Scientists can use other techniques, such as microcrystalline tests and chromatography, in the laboratory to confirm these identifications.

Law enforcement agencies also have access to databases and computer programs that give them the capacity to match the chemical composition of cocaine shipments so they can identify their country of origin and determine that several other batches of cocaine came from the same shipment. For example, this technology could analyze the composition of a kilogram of cocaine seized in Hudson City and determine that it matched a kilo of cocaine seized in Chicago, thus alerting investigators to a common sources for both batches of cocaine.

FIBERS AND HAIRS

Fiber and hair evidence appears at many crime scenes. Characters who want to be experts at hair and fiber identification can take SS: Fiber/Hair Analysis for use as a Complementary Skill with Criminology.

Fibers

Investigators often find animal, vegetable, mineral, and synthetic fibers at crime scenes. These include clothing fibers, carpet fibers, and the like. Criminalists usually distinguish between natural fibers (such as wool) and man-made fibers (such as polyester, dacron, and spandex), and can identify them the same way they identify hairs (see below).

A criminalist examines man-made fibers under a microscope to determine such characteristics as cross-sectional shape, striations, color and dye composition, chemical composition, environmental and handling effects (fading, wear and tear, and the like), and fiber type and subtype. Fibers are most useful when an examiner can definitely match them with fibers clearly connected to the criminal; otherwise, a particular batch of a certain fiber may be so large that connecting it with any one owner may prove impossible. Dye formulas may be particularly helpful in this case — since they're trade secrets, color and dye composition are often crucial to identifying the manufacturer of a fiber.

Hair

Hair is most often found at crime scenes when the crime is a violent one like murder or rape. At present, hair is not "fingerprintable" — criminalists cannot definitely match a particular hair to an individual. Nor can they determine the age or gender of the person who left the hair. However, hair does contain small amounts of DNA, and if a hair is fresh enough, it can be used for DNA typing. If the root is attached to the hair (such as when it's been violently pulled out of the scalp), DNA analysis of the root tissue may be possible.

What criminalists can determine about a hair is the following:

■ what part of the body it is from (for example, scalp hair versus beard hair)

■ the race (caucasian, mongoloid, negroid) of the person whose hair it is (though it is difficult to be certain about any such identification)

■ whether the hair fell out, was cut off, or was pulled out

■ whether the hair is human or animal hair

The best criminalists can do to match a hair to a particular person is to compare a hair's color and structure to that of control samples taken from the suspect. As with blood typing, the more comparisons an analyst can find, the smaller the group of potential suspects becomes, and the more likely that hair came from the suspect.

Another useful trait of hair is that it chemically "reflects" the substances a person has ingested in the past several days. This can provide clues regarding a person's diet or lifestyle. For example, the fact that a person had taken drugs or ingested poison could be told from his hair — traces of most common illegal drugs linger in hair for up to 90 days, which for most drugs is months longer than such traces remain in urine.

Hair and fibers are usually recovered from a crime scene with special vacuums, or by scraping items or objects and collecting the fibers that are knocked off. At the GM's option, it may require a Criminology roll at +1 to -3 (depending upon the amount and size of the evidence present) to find hair and fiber evidence.

FINGERNAIL SCRAPINGS

Fingernail scrapings or cuttings are commonly referred to in comic books, detective fiction, and "cop movies" as a source of evidence, particularly in some rape and murder cases where a female victim is thought to have scratched her assailant. The theory is that sample's of the criminal's skin and/or flesh will be found underneath the victim's fingernails. Unlike fiction, in real life fingernail scrapings rarely provide useful evidence. Depending upon how realistic the GM wants to be, he could impose penalties of -3 or more to the character's Criminology roll, or could require the character to make a Luck roll to determine if any evidence is present at all. If present, scrapings evidence can be used for DNA typing of the perpetrator; it may also contain hair or fibers.

FINGERPRINTS

The best-known type of evidence analyzed by criminalists is fingerprints. The study of fingerprints, which are formed by the ridges of skin on the tips of the fingers, is formally known as *dactyloscopy.* SS: Fingerprint Analysis (or SS: Dactyloscopy) covers all aspects of the study and examination of fingerprints and acts as a Complementary Skill; PS: Crime Scene Technician is also a Complementary Skill for purposes of locating and preserving fingerprints at crime scenes.

Fingerprints are extremely useful for identifying criminals, for two reasons. First, fingerprints are completely individualized — every person's fingerprints are unique to him (even identical twins have unique prints). Each fingerprint has *ridge characteristics* (also referred to as *minutiae*) such as ridge endings, bifurcations, short ridges, ridge crossings, and enclosures. Ridge characteristics form whorls, arches, and loops that are easily identifiable from a sufficiently clear print. A fingerprint's loops, arches, and whorls provide a basis for classifying the print by type and subtype for analysis and categorization using various systems (such as the Henry system in the United States). Fingerprint records are collected into electronic databases known as AFIS (automated fingerprint identification systems).

Second, a person's fingerprints never change during his lifetime. They always remain the same. Some criminals have tried to obliterate or alter their fingerprints, without success. It's possible to wound the fingertips so deeply that scars cover the fingerprints, but such scars are themselves easily identifiable. Fingerprints can also be obtained from the dermis (the second layer of skin) if the top layer has been burned or destroyed in some other way.

Fingerprints are only useful for identifying a specific individual, however. They do not tell investigators the age, gender, health, occupation, or race of the person who left them. Nor do they bear any correspondence to fingerprints of close relatives.

Finding Fingerprints

Complete fingerprints are not always available, but sometimes even a partial print is enough for a positive identification. Depending upon how much of a print is present, the GM may impose a -1 to -3 penalty to a character's Criminology roll; a failed roll means the character cannot recover an identifiable print. Similarly, with visible prints (see below), the substance that makes up the print may have adhered to the fingers in unusual ways, or collected in the furrows between the ridges of skin that comprise the fingerprint, making collection and identification of the print harder; a -1 to -2 penalty to the character's Criminology roll may be appropriate.

Fingerprints aren't always easy to see. *Visible prints* (left by someone whose fingers have been dipped in a visible substance, like blood or oil) and *plastic prints* (those left by pressing a fingertip into a malleable substance, such as clay) are visible to the naked eye. But *latent prints,* those made up only of the oils and perspiration of the fingertip itself, are usually "invisible." Criminalists can detect them in several ways; the method varies depending upon the type of surface the print is on. An investigator can dust hard and/or nonabsorbent materials (such as metal or glass) for prints: he applies a special type of dust, which adheres to the oily deposits left by the fingertip and reveals the print. The color of the surface dictates the color of powder used (for best contrast); evidence collection specialists can also use magnetic and fluorescent powders if necessary. A related method involves spraying the print with a chemical called ninhydrin. Prints on soft and/or porous materials (such a paper or cloth) are treated with chemicals, such as by iodine or cya-

noacrylate fuming, but are often harder to discover (particularly on cloth, since the weave obscures print details and the fibers absorb the oils that make the print). Criminalists can also use lasers to detect latent fingerprints on many types of surfaces.

Some surfaces are harder to get prints from than others. Human skin, for example, absorbs the oils that create fingerprints, making it difficult (but not necessarily impossible) to obtain prints from (for example, it's possible to leave a fingerprint on a corpse; the skin stops absorbing fingerprint oils after death). It's also harder to get prints off of rough surfaces (such as the checkered grip of a gun or a cinderblock). Depending on the surface and the equipment available to the character, the GM might assign a Criminology roll modifier of +2 to -6 (or worse) to find a usable print.

Latent print recovery methods are limited by time — the older a print is, the less likely it is that investigators can find it. Prints on porous surfaces last longer, as do those in damp weather or conditions. Fingerprints on nonglossy paper may last until the paper itself is destroyed — investigators have lifted fingerprints off Egyptian papyri thousands of years old. In addition to older methods involving the use of fingerprint powders, new methods using chemicals, lasers, or "alternate light sources" (such as quartz arc or xenon lights) can sometimes detect fingerprints which are 15-40 years old on some surfaces. (However, prints cannot, by themselves, be dated; nothing in the print indicates how long it's been there.) Depending upon the age of a fingerprint and the equipment available to analyze it, the GM might assign a -1 to -4 penalty to a character's Criminology roll.

Analyzing Fingerprints

Once a character has a fingerprint, he can try to match it to a suspect's print. This is relatively simple if the character has a suspect from which he can get a print sample; typically this only requires a Criminology roll at +1 or better. It's more difficult if the character only has a print and tries to use it to come up with a suspect. Decades ago, this involved manually comparing the print to other prints on record, a time-consuming and tedious task. Today it's done with computers which often make the task quicker and simpler — but even then, a proper identification can take days. In either case, if the print is incomplete or vague, analyzing and comparing it may prove difficult; a Criminology roll penalty of -1 to -4 (or worse) may be appropriate.

Surprisingly, no uniform standards exist for the matching of fingerprints. Each police department, law enforcement agency, and/or nation tends to have its own guidelines for how many points of comparison are needed for a "match"; then it's up to the district attorney to justify the criminalist's methods and procedures in court when he tries to prove the validity of the fingerprint evidence.

Other Identifiers

Fingerprints are not the only parts of the body that display unique markings which criminalists can use to identify an individual. Other possibilities include ear prints and lip prints, though these haven't yet been accepted in court.

FIREARMS AND BULLETS

Characters can recover a lot of information from guns, bullet fragments, bulletholes, and powder residue with Criminology. SS: Firearm Ballistics and Weaponsmith (Firearms) are Complementary Skills.

Bullets

When someone fires a gun, the grooves which line the barrel leave markings on the bullet. These markings are sort of the gun's "fingerprint." If investigators recover enough of the bullet, a technician can test-fire the gun and compare the two bullets using a comparison microscope. This method can positively identify which gun fired the bullet. (Shotguns, which have no grooves in their barrels, do not leave marks on the projectiles that are fired through them.)

Matching bullets this way isn't always easy. Rifling marks do not transfer well to some bullets (Teflon-coated armor-piercing rounds, for example), and a new barrel that's been carefully lapped (polished) may not create useful marks on a bullet until it's become worn through use. The gun's owner may deliberately mar or destroy the inside of the barrel after the bullet was fired (by, for example, scratching it with metal files or pouring acid down it) in an effort to prevent this sort of identification. Similarly, if the bullet is badly damaged by contact with its target, it may not be possible to compare the markings on it to a test bullet. The GM may assign Criminology penalties of -1 to -3 to reflect these difficulties, if appropriate.

Since criminalists have databases of the size, spacing, and direction and angle of twist for the lands and grooves of each commercially-produced weapon, they can often determine the type and make of gun that fired a bullet from the groove marks before the gun is ever recovered. The bullet casing may also have markings from the firing pin, breechblock, and/or shell extractor which will identify the gun (shotgun shells also have these markings, but caseless rounds have no case to mark). Revolver shell casings have different markings than shell casings used in semi-automatics.

The chemical composition of bullets varies from manufacturer to manufacturer and batch to batch, so criminalists may be able to "match" a bullet found at a crime scene with unfired bullets still in the perpetrator's possession by analyzing their chemical content. Similarly, by analyzing the chemical composition of a gunpowder sample, a criminalist can usually identify the type of bullet, and sometimes even the specific lot of bullets it came from. (See below for more information on gunpowder residue.)

In most cases, a criminalist can easily determine the caliber of a bullet if the bullet remains in the body, though it may be more difficult if impact with the victim's body has significantly deformed the bullet (a -1 to -2 penalty to Criminology). Bullet caliber is less easily determined solely from the size of the bullet wound, due to the plasticity of flesh and the fact that bullet wound channels can close after the bullet passes through them (the GM

can apply a -2 to -5 penalty to Forensic Medicine rolls, if appropriate). However, bullet caliber does not always prove what type of gun was used to fire the bullet — it's sometimes possible to wrap paper around a smaller bullet to make it fit into the chamber of a larger gun, thus fooling the investigator.

To assist with the analysis and identification of bullet evidence, characters in law enforcement can use the IBIS (Integrated Ballistics Identification System) database.

Gunpowder Residue

Gunpowder residue on a victim's body can also provide important clues. The amount of residue left on the victim's clothing or skin tells the criminalist how far apart the shooter and the victim were — a calculation known as *muzzle to first surface distance* (MFSD). Basically, the more powder residue, the closer together the shooter and target were:

■ If the muzzle of the gun is placed directly on bare skin over bone, in addition to the gunpowder residue there will be a star-shaped rupture of the skin, caused when the gases emitted from the barrel of the gun expand beneath the skin and tear it. A contact gunshot may also leave an abrasion collar or muzzle stamp (the imprint of the barrel caused by pressing it against the skin), and if the shot is through cloth, the heat of the shot will melt bits of cloth and fiber around the edges of the bullethole. An investigator may find bits of blood, flesh, or cloth in the barrel of a gun fired at such close range; this is known as "blowback."

■ At very close ranges (one inch or less) there will be a burn ring around the bullet's entrance hole caused by the flame emitted from the gun barrel.

■ At close ranges (usually about one to twelve inches), in addition to the bullet hole there will be traces of smoke and soot. These can be wiped off. The more soot residue there is, the shorter the distance between gun and victim.

■ At close to intermediate ranges (up to 36 inches for some rifles, or about 24 inches for most handguns), there may be "tattooing" of bare skin — projected particles of gunpowder that become permanently embedded in the skin. These particles cannot be washed or wiped off.

■ If the shooter and victim are farther apart than three feet or so, the only traces will be a "bullet wipe" (lead, carbon, and lubricant residues) in the edges of the entrance wound.

Of course, many things can affect powder residue — the weather (wind or rain, for example), the temperature, the angle of the shot, barrel length, caliber, bullet type, and so on. The GM may assign a penalty of -1 to -3 to a roll to determine the distance between shooter and victim to indicate the difficulty of gaining useful data.

Shotgun pellets spread about one inch per yard. This gives the investigator some indication of the distance between shooter and target.

Determining the distance between shooter and victim is a function of the *Forensic Medicine* Skill, not Criminology.

Gunshot Residue

Based on the design and condition of a gun, the length of the barrel, and the type of ammunition used, residue of the gunpowder and primer may be blown back to land on the shooter's hands or face. This "gunshot residue" (GSR) shows that a suspect recently fired a gun, and based on the powder composition used by various bullet manufacturers, may even tell the examiner what type of bullet the suspect shot.

To detect these traces, a criminalist must use a relatively sensitive test. All the test proves is that the subject recently fired *a* gun (the test can't identify the specific gun). However, if the analyst has certain types of spectrometers or energy-dispersive x-ray diffraction equipment available, he can determine the chemical composition of the residue, allowing him to "type" it and thus perhaps to link it to a particular type of bullet.

Unfortunately, GSR does not remain on the hands very long, and can be easily washed off.

The Gun Itself

Examination of a gun sometimes yields useful evidence. First, if a gun is fired close to the target, the "blowback" (the vacuum created by firing the gun) may suck hairs, blood, or bits of flesh and cloth into the gunbarrel. A criminalist can match this evidence to the victim.

Second, forensic science can restore obliterated serial numbers. Criminals often attempt to remove the serial numbers on guns (and on other items) to prevent them from being identified. If the criminal does a poor job of removing the number, a criminalist can apply an etching reagent to bring out the patterns below the surface of the metal where the number was stamped into the gun. If the criminal knows what he's doing and obliterates all traces of the number, it can't be restored.

Characters should not pick up guns by putting something in the barrel, as this could remove powder deposits or make marks that will hinder ballistics tests (if a gun has been picked up this way, the GM can impose a -1 to -2 penalty on the Criminology roll). The best way to pick up the gun is by the trigger guard or by the checkered portion of the grip, since these areas are the least likely to have usable fingerprints on them.

GLASS

Glass fragments from the crime scene and the criminal may fit together like a jigsaw puzzle for a quick identification. In other cases, a piece of glass's chemical composition, density, and refractive index may help to match it to a particular piece. After the criminalist determines the appropriate characteristics of a sample, he can compare it to an FBI database to find out how common that type of glass is. This tells him how likely it is the sample came from the crime scene.

Fractures in broken glass can also provide useful information. For example, bullet holes in glass are always wider on the exit side, indicating which direction a shot came from — but some types of damage, such as that caused by thrown stones, may be indistinguishable from bullet holes.

Stress marks on glass also show the direction from which force was applied to the glass — but some types of glass, such as the tempered glass used in the side and rear windows of cars, does not form the proper fracture lines for some types of analysis. Analysis of fracture lines may show which fracture occurred first, since a fracture always terminates when it meets another fracture line.

Because of glass's elastic properties, fragments of it will be thrown back in the direction from which a projectile (such as a bullet) came. This "blowback" may reach as far as 18 feet (2.75"). The small fragments of glass may then become attached to the person who broke the window, where investigators can later recover them and match them to the window.

SS: Glass Analysis is a Complementary Skill for studying glass fragments. The GM can apply negative modifiers of -1 to -3 based on how the glass was broken, the size and amount of fragments available for study, and the type of glass involved.

OIL AND GASOLINE

After being added to an engine, oils become contaminated with various substances, additives may be mixed in with them, and they can otherwise change. This sometimes makes it possible to "type" an oil sample to an individual car, provided the car hasn't been driven too far between the time oil is left at the crime scene and a test sample is taken from the car itself.

Because gasoline includes so many additives, and each gasoline producer has a different mix of additives, scientists can type gasoline to the refinery that produced it. This can assist, among others, arson investigators — though some gasoline additives might burn off in the fire started with that gasoline, making identification of the gas more difficult (a -1 to -3 penalty to the Criminology roll may be appropriate). Furthermore, oil company practices of selling surplus gasoline to other oil companies may complicate the process of tracking the gasoline back to its source (though it may also create a unique "blend" that a criminalist can easily match to a specific gas station or dealer during a specific time period).

PAINT

Paint residues are important evidence in hit and run automobile accidents, burglaries, and other cases. The criminalist compares paint chips under a microscope, looking at color, color layers, surface texture, and other characteristics to match the two samples. Examiners can also test paint chips with scanning electron microscopes or energy-dispersive x-ray analysis to determine their chemical composition. If the paint chips are large enough, it may be possible to fit them together and obtain a definite match.

Analyzing the chemicals in a paint can tell a criminalist the timeframe in which it was used. This may be crucial evidence in, for example, art forgery cases — if the paint used contains materials that did not exist when the painter lived, he could not have painted it.

PHOTOGRAPHS AND VIDEOS

Technicians can use digital imaging to enlarge, magnify, and "correct" photographs and videos, thus eliminating blurs, poorly focused images, and other problems with the film. Not only can this make seemingly unusable film usable, it can improve small or background images to the point where they, too, can be clearly seen. This often provides crucial evidence — license plate numbers, a clear photo of a suspect, readable print from books or documents in the background of the picture, and the like. Photo and video analysts are also experts at restoring and obtaining images from damaged films, photos, and videos.

With special equipment, an examiner can use a technique called *warping* (or "rubber sheeting") to change the perspective of a photo and/or eliminate distortion. Thus, for example, a photo which shows a shoeprint in the corner of a room can be "warped" with computer imaging so that an orthographic (viewed from above) picture of the shoeprint is obtained.

Through a technique known as *photogrammetry,* an analyst can determine the height of a person or object in a photograph. This requires the examiner to know the exact size of at least one other object in the photograph. Once a character has that information in hand, a Criminology roll allows him to know the height of anything else in the image within about one inch.

By analyzing the shadows in some photographs, examiners may be able to determine the date and time when the photo was taken. This requires SS: Shadow Analysis (a Skill also used by the military to make determinations about objects seen in aerial reconnaissance photos).

Depending upon the quality of a photo being analyzed, or the amount of damage it has suffered, the GM may impose penalties of -1 to -5 to the examiner's Criminology roll to determine useful details and/or obtain usable images. PS: Photography and SS: Photo/Video Analysis act as Complementary Skills to Criminology for purposes of analyzing photographs and videos.

PRINTS, IMPRESSIONS, AND TOOLMARKS

Fingers are not the only things that leave prints. Tools, shoes, tires, teeth, and other things can leave prints, marks, and impressions in or on various substances, and these marks can provide clues to the knowledgeable character.

Tools can usually be identified by comparing them to the impression and looking for distinctive nicks, marks, scoring, or other distinguishing features (though most often these features are microscopic; at the microscopic level, every tool is distinct). However, an investigator should never "fit" the tool into the impression in an attempt to match them, since this may alter the mark and ruin the evidence. Depending on the nature of the toolmark, an expert may also be able to determine what sort of tool made the mark.

Other impressions or tracks can be made by things like shoes, cloth, and tires. When they apprehend a suspect, investigators can compare the print

in question with the object that might have made it (for example, they can compare a footprint to the suspect's shoes). If a good enough print is obtained, it may also be possible to compare it to a database of known prints and identify it by type (for example, as a Brand X tire rather than a Brand Y tire). Footprints may also tell a trained investigator whether the subject was walking or running, how tall he is, and similar facts.

In appropriate instances, Tracking may serve as a Complementary Skill when a character attempts to determine who or what created a print or track on the ground. SS: Print And Impression Identification is also a Complementary Skill.

SOIL (FORENSIC GEOLOGY)

Forensic scientists try to identify soil as coming from a particular location, thereby linking soil samples found at a crime scene to soil found in another location. The more unique a soil sample is, the easier it is to identify it as coming from a particular place. Criminalists examine soil characteristics such as color, mineral content, the size of the soil grains, soil density, and soil components (foreign matter). They can also examine objects manufactured from minerals or soil, such as bricks, plaster, concrete, and some types of insulation. The most common test for comparing soil samples is the density-gradient tube technique, but other tests are available and they are all best used in combination.

Unfortunately, relatively little data is available to indicate how likely it would be to find two basically indistinguishable soil samples from different areas. Some studies indicate that, at least in some areas, soil samples are relatively unique (thus allowing the criminalist to easily identify the area where a sample comes from). Characters who need to make extensive use of soil evidence may want to invest some points in studying a particularly area to determine soil variability (bought as KS: [Area] Soil Variability, for use as a Complementary Skill).

SS: Geology is a Complementary Skill when analyzing soil. City Knowledge or Area Knowledge may also help identify the origin of soil samples.

TAPE

Criminals frequently use tape, particularly duct tape, in crimes — to bind victims, to blindfold them, to hold the parts of a bomb together. By comparing tape found at a crime scene to known samples, and by comparing torn or cut tape ends to see if they fit together, the criminalist can uncover valuable clues. Tape is also a good source of fingerprints and fiber evidence.

Other Rules

EQUIPMENT

While some uses of Criminology (such as gathering evidence, analyzing suspects' motives and behavior, and so on) don't require any equipment (or at best minimal equipment), analyzing evidence is different. To properly analyze most



forms of evidence a character needs a crime laboratory equipped with microscopes, chemistry supplies, fingerprinting materials, and other tools, plus access to reference materials.

Contents Of A Crime Laboratory

Here's a brief description of some of the equipment a character might have in his criminalistics laboratory. If a character cannot obtain some of the equipment described below, the GM can impose a negative modifier on Criminology rolls made when using the lab, or can simply rule that the character cannot perform some of the tests described above.

Chromatograph: A *chromatograph* separates and identifies chemical compounds. The substance to be identified is placed in a stationary medium. A moving medium passes over or through the stationary medium, and separates the various substances in the sample. The chromatograph cannot by itself identify the tested sample, but when linked with a mass spectrometer it can provide unquestionable identifications of thousands of substances.

Criminalists use both gas and thin-layer chromatographs — the former to identify gases and vaporized materials, the latter to identify liquid mixtures or dissolved solids. A third type, high-performance liquid chromatography, can be performed at room temperature (the samples do not have to be vaporized or heated), and so is used when characters must analyze explosives and other heat-sensitive substances.

Microscopes: No crime laboratory would be complete without several different types of *microscopes.* Besides the standard compound microscope, criminalists also use the comparison microscope (which allows a side-by-side comparison of two objects for identifying marks), the stereoscopic microscope (a low-powered microscope which provides a three-dimensional image of the viewed object, good for viewing bulky items), and the scanning electron microscope (which uses electrons to display images of very tiny objects). Microspectrophotometers combine a microscope and a spectrophotometer.

Neutron Activation Analysis: Another technique for identifying substances is *neutron activation analysis.* This process involves bombarding a sample with neutrons so a scientist can measure the resultant gamma ray radioactivity and identify the sample. Unlike chromatography, this process doesn't destroy the sample.

Neutron activation analysis works on minute quantities of a substance. Modern equipment is so sensitive it can identify substances from even the tiniest traces. Some types can identify a substance from only a 100-nanogram sample.

Spectrophotometer: A *spectrophotometer* measures the "absorption spectrum" of a substance — the quantity of light it absorbs. Each substance's absorption spectrum is distinctive and identifiable. Once a readout is obtained, it is compared to a vast library of known readouts to identify the tested substance. Similarly, characters can use emission spectrographs and atomoic absorption spectrophotometers to analyze the light selectively absorbed and emitted by the various elements. Spectrophotometers can work with ultraviolet, visible, or infrared light. Miniaturized versions (weighing about 70 pounds) can even be used in the field.

Lie Detectors

While devices designed to detect whether someone's telling the truth aren't exactly criminalistic tools, characters might use them to investigate and solve crimes.

The *polygraph,* or lie detector, has been available since the 1920s. It works by measuring emotional responses such as breath rate, heart rate, sweatiness, and blood pressure that tend to indicate the subject is being deceptive. Unfortunately, that means a nervous person who's telling the truth may register false positives, while a cool-as-a-cucumber liar could appear honest. Thus, while polygraphs may prove helpful in some cases, their results are not reliable enough to be admitted as evidence in most courts in most situations.

Scientists have developed a technique they think will prove more accurate: "brain fingerprinting." This devices "reads" the subject's mind, registering signals that the brain emits when it perceives things it's familiar with. If a subject's mind doesn't indicate familiarity with the circumstances, environment, and objects related to a crime, it's probable he didn't commit that crime. The results of the device have been admitted in some courts.

POWERS AND CRIMINOLOGY

In games involving superpowered characters, the use of superpowers can leave distinctive forensic traces. Sometimes these traces are obvious, such as the claw marks that would be left by villains like Scorpia, which would look bestial but probably would have been made in a pattern suggesting a bipedal attacker. But in some cases superpowers' trace evidence is faint or difficult to discover. For example, many types of energy powers might leave identifiable "energy patterns," but the average police department may not have the sophisticated equipment needed to detect them. Superpowered heroes, on the other hand, would likely be prepared for this sort of thing, giving the police and the heroes a good reason to work together.

Here are a few examples of possible forensic traces left by superpowers:

■ The use of ice- or cold-based powers would probably generate a lot of excess water from condensation or melting. Whether the water causes a flooding effect or simply soaks into the grounds and disappears depends on the locale. Other types of energy attacks may have their own "side effects" (flame blasts char and melt things, radiation blasts irradiate the area, sonic or vibratory blasts may leave microfractures in solid objects in the vicinity, and so forth).

■ Criminalists can detect the use of super-strength by running pressure and stress tests on the affected material. The amount of pressure generated by a "brick" character's fingertips when he's ripping the door off of a vault, picking up a car to smash someone with, or throwing a dumpster is enormous — so enormous that it's usually a dead giveaway.

Patterns of tearing or ripping may also indicate the use of super-strength. SS: Material Science or similar Skills would be Complementary to Criminology in this case.

■ Some types of comic-book weapons might be so well-made or efficient that they would leave very few traces, which in itself might be a clue. For example, if a character with a Questionite blade used it to murder someone, the super-hard metal might even cut clean through the bones in a way that would make it obvious no normal cutting weapon was used.

■ Magic in its various forms would probably leave an "energy signature" markedly different from scientific energies — one so different that maybe characters would need magical spells to detect it. Some types of attack spells would leave forensic traces resembling the spell's nearest scientific equivalent (*i.e.,* a mystically-created lightning bolt would have the same effect on a person as a large blast of electricity generated by a high-voltage line).

Ultraviolet Perception

Besides helping characters see at night, Ultraviolet Perception can also help them in their investigative work. Many types of trace evidence are visible under UV light even when they are not visible to the naked eye. For example, Ultraviolet Perception can detect tiny metal filings, places where blood was spilled but then cleaned up, fingerprints, old injuries, footprints and other tracks, and many other types of evidence. In some cases additional chemicals are needed, but characters with Criminology or Forensic Medicine have access to such things.

Infrared Perception and Microscopic Perception can also be very helpful when examining crime scenes (as can the ability to Shrink to so small a size that tiny trace evidence seems much "larger" and thus easier to find). Remember, however, that regardless of the Senses he has (or has access to through equipment), a character still needs Criminology to correctly interpret what he perceives.

CONSEQUENCES OF FAILURE

In most cases, a failed Criminology roll yields a result of "inconclusive." In other words, the character cannot conclusively connect a piece of evidence to a given suspect, can't reason out a suspect's *modus operandi,* or otherwise finds himself baffled. However, a badly-failed roll (by 4 or more) typically means the character obtained an *incorrect* result — he made so bad a mistake that he's misled himself. Typically this means he concludes that the real criminal didn't do it, but sometimes he may wrongly suspect an innocent person.

See the *Criminology Subfields* sections, above, for more specific information about some failed Criminology rolls.

BASE TIMES

Here are some suggested times Base Times for various Criminology tasks. As always, the GM should alter these as he sees fit. In some campaigns and genres it's perfectly appropriate for characters to glean a lot of information with Criminology in a short period of time; in more "realistic" games using the Skill may take even longer.

CRIME SCENE COMPLEXITY

Complexity	Base Time Modifier
Very Complex	x4 or more
Complex	x2
Average	x1
Simple	x0.50
Very Simple	x0.25

If a search using Criminology has a Base Time Modifier both for complexity and for the thoroughness of the search, apply the "complexity" multiplier first, then apply the "thoroughness" multiplier separately to the result.

Examining A Crime Scene; Gathering Evidence

The time required to examine a crime scene and gather evidence depends on three factors: the size of the scene; the complexity of the scene; and the thoroughness of the search. Start with the *Search Times* table for Concealment on page 137; it accounts for size and thoroughness. Then apply additional modifiers based on the complexity of the scene. Some crime scenes are simple — a single body on a sidewalk with little in the way of trace evidence around it. Others, including scenes with extensive blood splatters or multiple victims, make a thousand-piece jigsaw puzzle look like child's play by comparison. The Crime Scene Complexity table lists suggested modifiers.

Analyzing Evidence

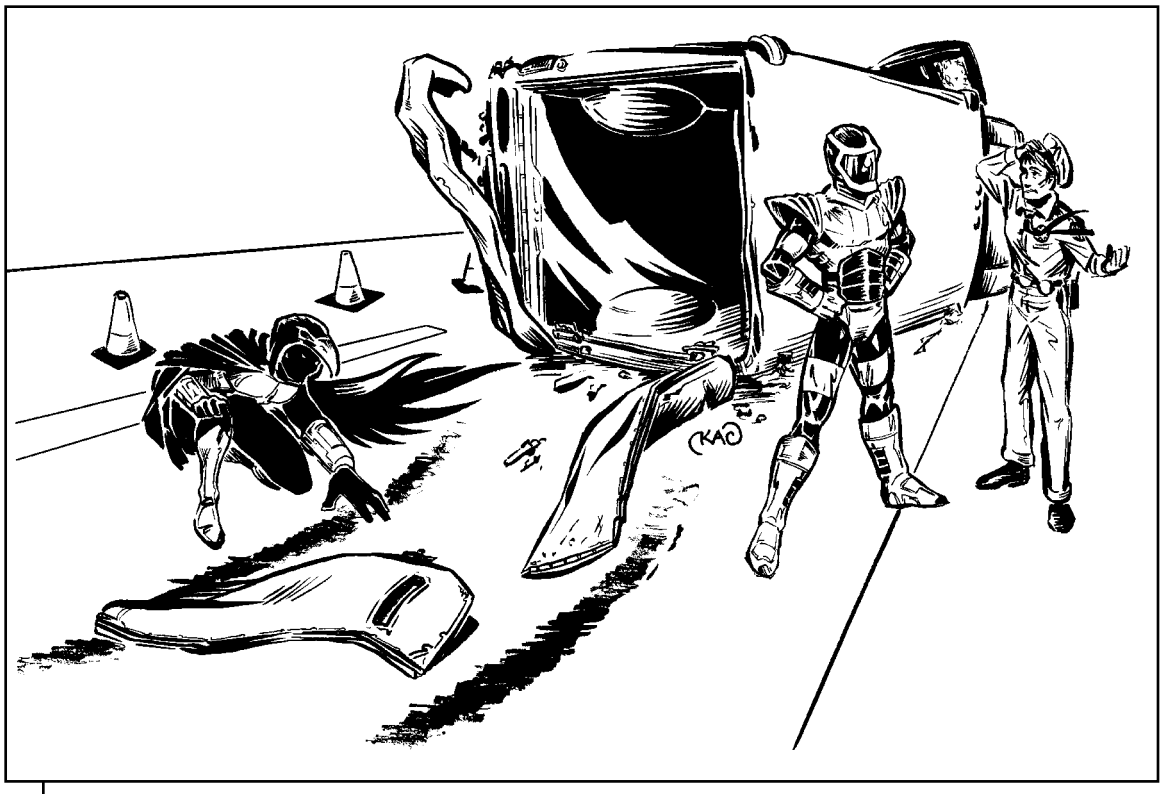
In some cases a character can analyze evidence and draw simple yet helpful conclusions by examining it with the naked eye (or any inherent sensory abilities he has); this typically takes a Full Phase, perhaps two or even as much as 1 Turn for a complicated piece of evidence. But most evidence analysis takes place in a crime lab, requires equipment (see above), and takes a minimum of 1 Hour. Longer Base Times, such as 6 Hours or 1 Day, aren't unheard of.

Criminological Evaluation

Studying the behavior and other characteristics of a criminal, preparing a criminal profile, or the like involves a Base Time of 1 Hour. Of course, to perform this sort of task the character needs plenty of information to work with, such as crime reports and crime lab test results, which he may have to wait for.

SUBDIVIDING CRIMINOLOGY

In a campaign where characters do a lot of criminalistics work, the GM might want to divide Criminology into a dozen or more Intellect Skills based on the subfields described above. Thus, instead of Criminology characters would buy Arson/Explosion Investigation, Forensic Geology, Fingerprint Analysis, Firearms Analysis, and the like. That way each of the investigator PCs could distinguish himself by being particularly skilled at some types of forensics work, but not so knowledgeable about other fields.



CRIMINOLOGY BY GENRE

Criminology is most appropriate for Modern (including near-modern) and Future settings. Fingerprinting and other scientific techniques, for example, have been used in crimefighting for only about a century (see *Pulp,* below, for a few details). Specialized applications may be appropriate for some genres.

Dark Champions

Criminology tends to be more useful in *Dark Champions,* with its frequent emphasis on modern-day crimefighting, than in any other genre. It's for this sort of game that the GM's most likely to consider subdividing the Skill.

Fantasy

Criminology has some applications in typical Fantasy settings, where it's sometimes renamed *Inquisition.* It's more of an observational Skill, akin to Deduction and Interrogation, but includes knowledge of criminal behavior and the ability to skillfully interview witnesses and gather whatever clues the society has the technological capability to analyze. In an unusual "Fantasy Crime Scene Investigations" campaign where the heroes are detectives who use magic to do what modern criminalists do with science, or in an Urban Fantasy game where investigators use both magic and science, Criminology may function in its usual fashion. In fact, magic may make it even easier to use, removing most of the possibility of misidentification/doubtful identification of suspects.

Pulp

In the pulps, a "criminologist" could be just about anyone who was particularly adept at solving crimes; Pulp writers didn't use the term with precision. In many ways this Skill, which incorporates both the ability to analyze forensic trace evidence and various other investigation techniques, fits the loose Pulp usage quite well. It's perfectly appropriate for Pulp detectives and cops, but it isn't quite as advanced as in the modern day. Criminalists of the era have a lot of scientific tools at their disposal, but still lack many of the ones most commonly used by their twenty-first century descendants. (This applies to Forensic Medicine as well.) For Example:

Ballistics: New York had and used a large collection of forensic ballistic data by the early Twenties, and other agencies and governments can likewise analyze bullets, firing pin marks, and other ballistic evidence during the Pulp era.

Blood Analysis: Karl Landsteiner discovered the four basic blood types in 1901, but blood typing isn't a common criminalistic tool in the Pulp era. A few investigators and agencies, mostly in Europe, used it as early as the mid-Twenties. American law enforcement didn't start establishing significant crime laboratories that can perform blood typing work until the mid-to-late Thirties. However, just about any police department in the Pulp era can perform the precipitin test to distinguish animal blood from human, and early studies of blood splatter evidence are available for investigators trying to puzzle out the events of a crime.

DNA: DNA "fingerprinting" doesn't exist in the Pulp era. DNA hasn't even been discovered yet.

Fingerprinting: Fingerprinting was developed as a criminal investigation technique in the late 1800s, and by the Pulp era was commonly used all over the world. Characters had best beware leaving their prints all over crime scenes; it's likely that if the cops arrest them for anything, they'll get printed.

But even when cops or characters have fingerprint evidence, using it isn't easy. Matching a specific fingerprint to a specific suspect poses no difficulties, but searching through fingerprint records to find a match to an unknown print is a laborious, time-consuming chore. Not all police agencies even maintain collections of fingerprints yet. The FBI and most large metropolitan departments do, but they don't share information and there's no way to access their collections remotely.

Forging fingerprints is a favorite Pulp fiction plot device. Villains and clever crooks use skin taken from the hands of a dead man, specially-molded plastic prostheses worn on the fingers, and similar devices to make it look like someone else did the dastardly deed, forcing the hero to fall back on methods other than fingerprinting to solve the crime.

Other Techniques: Most other forensic techniques are available to Pulp-era characters, even if they're not widely used or as well-understood as they are today; indeed, many are referred to, in simple fashion, in the Sherlock Holmes stories of the Victorian era. Characters can analyze soil samples, cigar or cigarette ashes, hair, dental records, handwriting, laundry marks, and the like to make comparisons and thus connect the suspect to the scene of the crime.

Criminalistic Tools: Investigators have a whole slew of tools available for forensics work. Microscopes and cameras work much better than in previous times, enhancing characters' ability to provide valid evidence. The spectroscope, used for identifying chemicals and other substances, has been invented. Criminalists know how to use X-rays and ultraviolet light to find evidence invisible to the naked eye. At the GM's option, characters suffer penalties of -1 (or worse) to Criminology rolls involving technology because Pulp-era devices tend to work poorly and less efficiently than modern ones.

Weird Tech: Of course, the Weird tech of the pulps can change anything said above. Technical Detectives and other characters sometimes used far-out gadgets that even modern forensic scientists would envy to gather evidence, unravel mysteries, and unmask killers.

Science Fiction

At higher tech levels, the amount of information a forensic scientist can squeeze out of a corpse or a crime scene is astounding. Even on modern Earth, a fragment of hair or skin can provide identifying DNA. In near-future campaigns, that DNA could be decoded to create a genetic model of the suspect or an unidentified body, in effect making a "virtual clone" for identification purposes. Criminals will have to develop equally sophisticated methods to avoid leaving trace evidence (or to destroy whatever they do leave behind).

Superheroes

Most *Champions* campaigns feature at least one PC (or major NPC) who's an expert detective skilled in forensic matters. While super-technology may make his job easier (by providing him with micro-miniaturized but ultra-accurate crime lab equipment, for example), superpowers may complicate it even more. Solving a murder mystery can be tough enough in the real world; imagine what it's like in a setting where characters have Powers like Desolidification, Drain BODY, Flight, Telekinesis, and Teleportation. See *Powers And Criminology,* above, for further discussion.

Western/Victorian

See *Pulp,* above, for some general information about the history of criminalistics.

CRYPTOGRAPHY

Type: Intellect Skill (roll: 9 + (INT/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

This Intellect Skill allows a character to decrypt (solve or "break") ciphers and codes, encrypt or encode messages, hide messages in ordinary text, and perform similar tasks. Decrypting a cipher or code without the key is known as *cryptanalysis.*

A character with Cryptography knows about the standard methods used to encode and decode messages, including the history of cryptology, cryptological technology, and the like. Science Skills (like Mathematics) and Computer Programming are usually Complementary to Cryptography. In some cases, linguistic Skills may also be Complementary; see *Language,* below.

Success And Failure

If you use this section's optional rules for Cryptography, you have to change one basic *HERO System* rule about Skills: a roll of 3 on 3d6 *does not* always succeed when a character makes a Cryptography roll. If that were the case, there'd be no such thing as a secure code, since on the average a character could break any code with no more than 216 rolls. In some cases automatic success on a 3 is possible — maybe a character, while working on a relatively simple code, has a flash of insight and instantly knows how to break the code — but in many cases, particularly with regard to computerized cryptography, that rule defies both common and dramatic sense.

Types Of Codes And Encryption

For game purposes, codes are split into three groups: pre-machine codes; codes created by cipher machines; and computerized cryptography.

All references to modifiers for "deciphering" or "decrypting" assume the character lacks the key to the code and tries to "break" it. If he has the key, decoding a message is so simple a task it rarely even requires a roll.

PRE-MACHINE CODES

Long before the existence of cipher machines and computers, people created codes by hand or using simple tools. It's in this period that the terminology and methodology of cryptography developed. Broadly speaking, one can divide encryption into two types: codes and ciphers.

A *code* is a system of encryption in which specific symbols, words, or phrases stand for other words or phrases. For example, "blue bonnet" might mean "artillery," and "barnyard" might stand for "Paris, France." The string of code-words may be utterly meaningless, but the cleverest codes involve placing the seemingly innocent code-words in the midst of innocuous text. Determining the true meaning of a code is virtually impossible unless the decoder has access to the codebook (in which case it's child's play) or enough messages with enough context to make it possible to determine correlations.

A *cipher* is a method of encryption in which each letter in the original message is replaced by some other letter, number, symbol, or what have you. The system for enciphering the message is known as the *key.* Unlike codes, which are rigid and unchangeable, most ciphers are flexible (sometimes enormously so). The key allows for changes or forms of variation that make the decipherer's job much more difficult.

Substitution And Transposition Ciphers

All ciphers fall into one (or both) of two categories: substitution ciphers and transposition ciphers.

Substitution Cipher: The most basic of ciphers, in which each letter is replaced by another letter or number according to the key, but doesn't change its position within the word. A simple child's cipher, such as A = 1, B = 2, C = 3, and so on, is an example of a substitution cipher. Many of the other types of ciphers listed below are, fundamentally, just elaborate variations on the substitution cipher.

Even if he lacks a cipher's key, a cryptanalyst can often solve a substitution cipher via *frequency analysis* — determining the frequency with which letters appear in a given language, and then applying that information to the cipher's symbols to make it statistically simpler to guess what each one stands for. The use of *nulls* — additional, meaningless characters scattered throughout the message — partly counteracts this, as does deliberate misspelling; it also works better on long messages than short ones.

Substitution ciphers fall into two general categories: *monoalphabetic,* in which the cipher remains the same throughout the message (*e.g.,* the homophonic substitution cipher); and *polyalphabetic,* in which the cipher changes one or more times throughout the message (*e.g.,* the VigenPre cipher).

A simple substitution cipher counts as a Very Simple code (modifier of +2 or better). More elaborate ones are Simple, Average, or Complex.

Transposition Cipher: This form of encoding involves changing the position of a letter or word within a message, but not the letter's or word's meaning. The transposition takes place according to the key, so that the recipient of the message can easily decipher it. For example, in a transposition cipher in which every two letters are reversed, "river" becomes "irevr." A transposition cipher counts as a Very Simple or Simple code (modifier of +0 or better).

Specific Types Of Codes And Ciphers

Some specific types of codes and ciphers include:

Auto-key Generation Code: In this form of substitution cipher, the letter used to stand for the true letter depends on the letter preceding it. For example, suppose a character wants to encrypt the word "river." The R is in plain text. R is the 18th letter in the Latin alphabet. The next letter to encrypt is I, so the encoder counts 18 letters from I, yielding Z. Z

is the 26th letter in the alphabet, and 26 letters from V is U. Thus, "river" ends up as RZUZQ. An autokey generation code cipher counts as a Simple code (modifier of +0 or +1).

Book Cipher: A cipher in which a book, portion of a book, or some other piece of text provides the key. A book cipher counts as a Very Complex code (modifier of -5 or worse), but the GM may reduce the penalty if the character has clues regarding which book or document is the key (*e.g.,* he has access to the encoder's library, he makes a Deduction roll after learning some relevant facts, or the like).

Caesar-Shift Substitution Cipher: A substitution cipher in which each letter of the message is replaced with the letter *x* places down in the alphabet; *x* is a number between 1 and 25. The classic example uses *x* = 3, so that "river" becomes "ulyhu." A Caesar-shift cipher counts as a Very Simple or Simple code (modifier of +0 or better).

Homophonic Substitution Cipher: A form of substitution cipher in which each plaintext letter has several possible substitutions (the number usually varies based on the frequency of the letter). A homophonic substitution cipher counts as an Average code (modifier of -2).

Keyword Code: A keyword code (or, more accurately, keyword cipher) uses a word or phrase with ten letters or words, none of which repeat. The letters or word represent the numerals 1 through 9 and 0. The letters or words can be used to write phone numbers, letters of the alphabet (via a simple substitution cipher), and the like, though to the uninitiated they look like meaningless strings of letters. Keyword codes are popular among criminals, since they're easy to remember. A keyword cipher counts as a Very Simple or Simple code (modifier of +0 or better).

Nomenclator: A system of encoding that relies mainly on ciphering, but with some codewords involved as well. A nomenclator counts as an Average code (modifier of -1 or -2).

Onetime Pad Cipher: Toward the end of the First World War, American cryptographers found ways to restore the VigenPre cipher (see below) to usefulness by making the key structureless and extending its length to the length of the message. The keys are meaningless strings of letters listed on sheets on a pad. The key on each sheet is unique and used only once. Both sender and receiver have a copy of the pad. After encrypting and decrypting a message with the key on the first piece of paper on the pad, the sender and receiver both destroy that sheet. The randomness of the key makes it mathematically impossible to decipher the code via cryptanalysis. In fact, the possibility exists that anyone trying brute-force cryptanalysis will actually "read" a seemingly true message in the encrypted text that isn't there! However, the onetime pad cipher system suffers from practical difficulties — logistical problems relating to manufacturing and distribution, vulnerability to the loss or theft of the pad — so it was hardly ever actually used. Only in situations where the risks are acceptable and the logistical difficulties easily overcome can a onetime pad cipher function effectively. For example, one is (or has been) used in secure communications between the presidents of the United States and the Soviet Union. A onetime pad cipher counts as a Very Complex code; creating one requires a Cryptography roll at -5 (or worse); deciphering one is impossible.

Pigpen Cipher: A monoalphabetic substitution cipher that uses tic-tac-toe and X-shaped grids to generate symbols to replace letters. It's been used for centuries; for example, the Freemasons of the 1700s employed it to keep their records secure. A pigpen cipher counts as a Very Simple or Simple code (modifier of +0 or better).

Playfair Cipher: A relatively simple substitution cipher that uses a keyword, a five-by-five square of letters, and a system of breaking messages into digraphs (two-letter combinations). A Playfair cipher counts as a Very Simple or Simple code (modifier of +0 or better).

Rail Fence Transposition Cipher: A cipher in which the alternating letters of a message are written on two lines, one above the other, and then the two lines of gibberish are joined into one long line of gibberish. Decoding it is simply a matter of knowing or deducing where the two lines join. A rail fence transposition cipher counts as a Very Simple or Simple code (modifier of +0 or better).

Superencipherment: Double ciphering, *i.e.,* running a cipher through another cipher algorithm. Performing a superencipherment requires a Cryptography roll with the combined modifiers for the two types of ciphers used; deciphering one requires a Cryptography roll with the combined penalties of the two types of ciphers used, plus an additional -2.

Vigenère cipher: Invented around the year 1560, the VigenPre cipher is a series of 26 separate cipher alphabets, each one Caesar-shifted. A keyword determines which cipher alphabet is used to encode/decode each letter of the message, making cryptanalysis by frequency analysis impossible. VigenPre ciphers remained unbreakable until 1854, when Charles Babbage devised a way to crack them (though he didn't publish it, so it became known as the Kasiski Test after the man who did in 1863). A VigenPre cipher counts as a Very Complex code (modifier of -5 or worse).

Rules For Pre-Machine Codes

In most cases, you can resolve attempts to encrypt or decrypt a "handmade" code or cipher using the normal Skill Versus Skill Contest rules and the modifiers outlined above. See below regarding base times.

Language

Of course, breaking a code doesn't confer knowledge of the language in which the plaintext is written. In fact, if the cryptanalyst cannot speak and read the plaintext language, he may have trouble deciphering the cipher, since awareness of linguistic structure and the like may provide clues to cracking the code.

CRYPTOGRAPHY MODIFIERS TABLE

Amount Of Text	Modifier
Very Small (a few words)	-8
Small (a few lines)	-4
Average (a page)	+0
Large (several pages)	+2
Very Large (a book)	+4
Complexity Of Code	**Modifier**
Very Simple	+1 or worse
Simple	+0
Average	-1 to -2
Complex	-3 to -4
Very Complex	-5 to -8
Incredibly Complex	See text re: cipher machines and computerized cryptography
Extremely Complex	See text re: cipher machines and computerized cryptography
Astoundingly Complex	See text re: cipher machines and computerized cryptography
Other Modifiers	**Modifier**
Cryptanalyst does not know the language the plaintext is written in	-2

For that matter, a language itself, if untranslateable by others, can serve as a foolproof code. The Navajo "code talkers" who helped America with battlefield communications in World War II are a perfect example. The Axis powers had no way to translate the complex Navajo language, making it an ideal method for passing secret messages; it was never "broken."

CIPHER MACHINES

Cryptologists eventually learned to use machines to aid in the cryptographic process. The earliest known machine is a form of *cipher disk,* two metal disks with the alphabet inscribed around the edge of each, invented in fifteenth century Italy. Cipher disks were used in many situations and conflicts, including the American Civil War (and in the twentieth century for childrens' "decoder ring" toys).

The Enigma Machine

In 1919 the German Arthur Scherbuis invented the *Enigma machine,* a sort of highly-advanced electronic form of the cipher disk, and revolutionized cryptology. (Inventors in the Netherlands, Sweden, and the United States all invented similar machines in the 1919-27 period, but like Enigma they were all commercial failures with the business community.) The device, which wasn't much larger than a typewriter, had over 10 quadrillion possible keys, making brute-force cryptanalysis effectively impossible. All Enigma required for use was that both the sender and receiver have one of the machines and a codebook indicating the initial scrambler setting. Thanks to Enigma, the German military, which had been cryptologically backward during World War I, had the most secure cryptography in the world during much of the Pulp era...

...until a disaffected German sold the plans for building an Enigma machine to the French in 1931. France's ally Poland employed a brilliant mathematician named Marian Rejewski, who found a way to determine the day and message settings the Germans used. His efforts were negated in 1938 when the Germans complicated the workings of Enigma and once again rendered it secure. But in the summer of 1939, the Poles supplied their methods and breakthroughs to the French and British so the work of once again defeating Enigma could continue.

At the newly-formed Government Code & Cypher School at Bletchley Park, the British set to work to break Enigma a second time. With more resources and manpower than the Poles, they were soon able to do so by building on the Poles' accomplishments. Although the Germans advanced the sophistication of Enigma throughout the war, the British, whose codebreakers included the likes of Alan Turing, kept pace with them. The transparency of German communications due to the efforts of Bletchley Park was one of the decisive factors in the Allied victory.

The Allies had their own cipher machines, which the Germans did not break. The difference is that the Germans used their machines in ways which gave cryptanalysts clues that enabled them to break the code, whereas the British and Americans didn't make such mistakes. Enigma could easily have been unbreakable... if used with full and proper security protocols.

Cipher Machine Rules

To operate a simple cipher machine, such as an early cipher disk, a character need only make a Cryptography roll (if a roll is necessary at all). Operating a complex cipher machine like Enigma requires a dedicated Professional Skill (*e.g.,* PS: Use Enigma Machine).

A cipher machine's strength and sophistication is rated by its Cryptography roll. If the person doing the encoding uses the machine properly, the penalty listed in the Cipher Machine Cryptography table applies to attempts to decrypt the message without the key. If he fails, the listed penalty still applies, but is reduced by the number of points he failed the roll by. For example, ordinarily an advanced cipher machine (21-) imposes a penalty of -16 on decryption attempts. If the operator fails his roll by three, then the penalty becomes only -13.

When someone tries to decrypt a message enciphered by a cipher machine, he engages in a Skill Versus Skill Contest against the results of the machine's roll; the machine's "strength of encryption" penalty modifies his roll. For example, suppose that the *Nichtwahr* cipher machine has Cryptography 18-. The operator makes his PS: Use Nichtwahr Machine roll, so he then rolls 3d6 for the machine, getting a result of 11. The machine has made its roll by 7, and due to the strength of its encryption imposes a base -8 penalty. Therefore someone who wants to break the cipher without the key has to make his own Cryptography roll... at a -15 penalty (the base -8, plus 7 for the amount the roll succeeded by).

Unlike computers (see below), cipher machines generally can only encrypt messages. They can, of course, decrypt messages they create

themselves, and in fact are necessary for that purpose (for example, until its encryption was "broken," the only way to read a message from one Enigma machine was to feed it into another, properly-configured Enigma machine). Characters cannot simply enter any encoded message into a cipher machine and have the machine try to decipher the text.

COMPUTERIZED CRYPTOGRAPHY

The first use of what are now called "computers" in the field of cryptology was during World War II (the British machine Colossus, used to decipher the Lorenz cipher with which Hitler communicated with his generals). Once computers got involved with breaking ciphers, it wasn't long before they were involved in making them. Soon any serious cryptography was done with computers, not pencil and paper or even machines like Enigma; the modern cryptographer relies almost wholly on computers.

Computers have three distinct benefits over cipher machines. First, cipher machines are limited by the practical constraints of what can be built, whereas a computer can easily mimic a machine with hundreds of scrambling dials — and it can make them turn in different directions, appear and disappear, rotate at different speeds, and so forth. Second, computers operate far faster than mechanical machines. Third, the binary language of 1s and 0s that computers "speak in" offers enormous possibilities for both substitution and transposition.

Modern computer encryption depends on two concepts. The first is that of the *asymmetric key cipher,* a method of encoding a message in which the key for enciphering it differs from the key to decipher it. Prior to the 1970s, all ciphers were *symmetric,* meaning the keys had to be the same, but the rise of computers made asymmetric encoding possible. The second is *public key cryptography,* which uses a system in which one person publicly distributes the key to encrypt messages sent to him, but keeps secret the asymmetric key that decrypts them. The values of the numbers chosen for the keys are so high as to make the encryption effectively unbreakable. The best-known form of public key cryptography is PGP (Pretty Good Privacy), a free computer program. According to one authority, even if every personal computer in the world were put to the task of trying to crack a single message encrypted with PGP, it would take approximately 12 times the age of the universe to succeed.

Computer Cryptography Rules

In game terms, you can resolve attempts to encrypt and decrypt messages protected by computerized cryptography using the two computers' Cryptography rolls (with their operators' rolls as Complementary, if appropriate) in a Skill Versus Skill Contest. (In some cases Computer Programming or SS: Mathematics may be Complementary Skills.) But the truly important factor is the power and sophistication of the computer's cryptography software.

CIPHER MACHINE CRYPTOGRAPHY

Cryptography Roll	Strength Of Encryption
8-	-1 penalty
9- to 11-	-2 penalty
12- to 15-	-4 penalty
16- to 20-	-8 penalty
21- to 25-	-16 penalty
...and so on	

The strength of computer encryption depends on the key length, or number of bits in the keys used to encipher and decipher a message — 16 bits, 32 bits, 64 bits, and so on. The number of bits equals a negative modifier to attempts to decrypt the message without a key. For example, trying to crack a message encrypted with 256 bit encryption entails a -256 penalty! The accompanying table provides suggested guidelines for the strength of a computer's cryptographic software, based on its Cryptography roll.

Cryptographic software also provides a bonus for decrypting messages; the bonus equals half of its encryption penalty. For example, a computer with Cryptography 16- can encrypt messages so well that attempts to break them incur a -128 penalty; if it tries to decrypt a message without the key, it receives a +64 bonus. As a result, in most cases a character has no hope of breaking a cipher encoded by computers as powerful or more powerful than the ones he has access to, but some chance to break encryption created by weaker or less sophisticated computers.

The bonuses and penalties for computerized Cryptography apply only to ciphers created by computers. When used to crack a cipher generated by hand, the computer uses its standard Cryptography roll. However, the GM may, in his discretion, allow characters to apply some or all of a computer's Cryptography bonus to non-computerized codes — for example, perhaps they could enter a handwritten substitution cipher into a computer and use the computer's power to break the code in just a few seconds by running through all possible substitutions. As always, common sense, dramatic sense, and considerations of game balance should be the deciding factors.

Of course, it's entirely possible that someone will come up with a way to easily break computerized cryptography (this was the central plot device driving the movie *Sneakers,* for example). The codebreakers having caught up to the codemakers, the race will start again with further attempts to create inviolable codes... followed by attempts to decrypt them.

COMPUTERIZED CRYPTOGRAPHY

Cryptography Roll	Bits Of Encryption	Bonus To Decrypt
8-	8 (-8 penalty to decrypt)	+4
9- to 11-	16 (-16 penalty to decrypt)	+8
12-, 13-	32 (-32 penalty to decrypt)	+16
14-, 15-	64 (-64 penalty to decrypt)	+32
16-, 17-	128 (-128 penalty to decrypt)	+64
18- to 20-	256 (-256 penalty to decrypt)	+128
21- to 25-	512 (-512 penalty to decrypt)	+256
26- to 30-	1,024 (-1,024 penalty to decrypt)	+512
31- to 35-	2,048 (-2,048 penalty to decrypt)	+1,024
...and so on		

Steganography

Also falling within the purview of the *Cryptography* Skill is *steganography,* the practice of secretly communicating messages not by encoding them, but by hiding them. Anyone who finds the message can read it... but first he has to find it!

In ancient times, people used many clever but (by modern standards) low-tech methods to hide messages. Examples include:

■ scraping the wax off a tablet, writing a message on the board, and pouring wax back on top so the object looks like an ordinary, blank tablet

■ shaving a slave's head, writing the message on his scalp, and then letting his hair regrow to hide the message

■ writing the message on silk, crumpling the silk into a tiny ball, coating the ball with wax, having the messenger swallow the wax ball, then retrieving the wax ball from his feces

■ the use of *invisible ink* — inks that only show up when treated in specific ways

As technology became more advanced, so did steganography. For example, during World War II and the Cold War, nations could use *microdots* — a page of text shrunk down to the size of a period on a printed page — to convey information. Modern cryptographers use computerized steganography to hide all sorts of data in seemingly innocent graphics.

Of course, it's possible to use both encryption *and* steganography on a single message. That provides two levels of secrecy to protect the message.

Translation

In some campaigns, Cryptography can also represent a character's knowledge of ancient, obscure, and dead languages. While the character cannot speak these languages, or read them easily, he can, given sufficient time and reference materials, translate them — thus providing a way to read the grimoires of long-dead wizards, the instructions on treasure maps from empires that fell millennia ago, and so forth. If a character can only use Cryptography this way (*i.e.,* he cannot decode and encode messages), he can buy it with a -½ Limitation, *Translation Only.*

Other Rules

EQUIPMENT

As discussed in detail above, for thousands of years Cryptography generally involved no technology beyond that necessary to write. But once cipher machines are developed, technology rapidly comes to play a more and more important part in cryptology. By the time of the Enigma machine and, later, computers, reliable Cryptography virtually requires equipment; without it, a character lacks the means to securely encrypt messages or the means to decrypt enemy messages.

POWERS AND CRYPTOGRAPHY

Characters may be able to use some Powers to overcome the need for Cryptography. For example, Retrocognition or the ability to read the "psychic traces" left in the message by the encoder (Detect True Meaning Of Message, or the like) might render the most complex, secure code transparent to the character. For this reason, the GM may want to forbid or restrict the use of such powers; they're likely to spoil the mystery and fun of deciphering a message "the old-fashioned way."

Similarly, some Powers may help characters encode messages. An Uncontrolled, 0 END form of Images could be applied to a message to "encode" it, for example — and possibly even be "programmed" to change appearance every few minutes so that a cryptanalyst can't possibly have the time to decode it.

CONSEQUENCES OF FAILURE

When a character encrypts a message, failure usually means improper coding, leading to a garbled message. A badly-failed roll (by 4 or more) may even communicate the *wrong* message.

When a character tries to decode a message (or find a steganographically hidden message), failure typically means the character can't break the code. A badly-failed roll (by 4 or more) may mean he *thinks* he's broken it, but in fact he's mistaken and has incorrectly "translated" it.

BASE TIMES

Except in the cases of the simplest handwritten ciphers and the most advanced decryption technology, encoding or decoding a message is usually a time-consuming and laborious process. Several factors influence the time involved.

The first is the length of the message — the longer it is, the longer it takes to encode. On the other hand, as noted in the Cryptography Modifiers table, the longer the message the greater the chances of cryptanalyzing it successfully.

The second is the complexity of the code. A simple substitution cipher can sometimes be written nearly as quickly as normal writing; creating and writing a message in a VigenPre cipher could take days. Superencipherment, steganography, and the like only increase the time.

The Cryptography Base Times table provides suggested guidelines for the time needed to encode and decode messages. The GM should alter these as he sees fit.

SUBDIVIDING CRYPTOGRAPHY

In campaigns involving a lot of cryptology work, the GM might want to change Cryptography into three Intellect Skills: Encryption (the ability to create codes and write messages in code); Decryption (codebreaking); and Steganography. This division isn't entirely logical, but does allow characters to specialize in one aspect of Cryptography easily.

CRYPTOGRAPHY BY GENRE

Cyberpunk/Near Future

It's possible that by the Cyberpunk era, mankind will have invented quantum computers or other such super-fast computing devices. These are computers so fast that they can run through the calculations needed to crack computerized encryption swiftly enough to render such encryption worthless. But of course, forms of encryption are likely to advance as well, creating practical quantum cryptography. Therefore, you're probably safe in adapting the rules outlined above for computerized cryptography and using them with a few changes in terminology and the like.

As noted above, cryptography tends to be very technology-sensitive. You may want to apply the "technology levels" modifier discussed on page 39 in addition to the modifiers in the Computer Cryptography Table — though those modifiers are, in effect, just a specific elaboration of the general rules for varying types of technology.

Dark Champions

Computerized cryptography is firmly entrenched by the standard Dark Champions time period (late twentieth/early twenty-first centuries). In fact, the ease with which essentially unbreakable cryptography is available to the public significantly hinders the ability of law enforcement — and vigilantes — to read information intercepted from criminals and terrorists via wiretapping and the like.

CRYPTOGRAPHY BASE TIMES

Encoding Time*	Complexity Of Cipher	Decoding Time*
5 Minutes	Very Simple	1d6 x 5 Minutes
20 Minutes	Simple	1d6 Hours
1 Hour	Average	1d6 Days
6 Hours	Complex	1d6 Weeks
1 Day	Very Complex	1d6 Months
1 Week	Incredibly Complex	1d6 Years
1 Month	Extremely Complex	1d6 Centuries
1 Season	Astoundingly Complex	1d6 Millennia

Length Of Message	Encoding Time Modifier†
Word	x.01
Sentence	x.10
Paragraph	x.33
1 Page	x1
2-3 Pages	x1.5
4-7 Pages	x2
8-15 Pages	x3
16-31 Pages	x4
...and so on	

*: The use of a cipher machine or computerized cryptography can reduce these times drastically, often to a matter of minutes or seconds.

†: Apply this multiplier to the listed Encoding Time to determine the time required to encrypt a message.

Fantasy

In the Fantasy era, most ciphers fall into the Very Simple, Simple, or Average categories... but then again, so does the knowledge of how to decrypt them. Simple steganography is also popular. But in a Fantasy setting, characters may have to contend with magical cryptography. Boadlane's Lens Of Enlightenment and Boadlane's Spell Of The Secret Script (*The Fantasy Hero Grimoire,* pages 220-21) are two examples of spells that could perform a cryptographic function, but many others are possible. Instead of pitting the encoders' ingenuity computers against the cryptanalyst's ingenuity and computers, cryptology in a Fantasy setting may be a matter of magical power and insight.

If an otherwise mundane code or cipher involves magic (such as coded writing that periodically changes form), a character suffers a stiff penalty to decode it (at least -3, and often more; decoding the text may be impossible without the magical command word).

The *Translation Only* form of Cryptography also crops up as a way for characters to read ancient, obscure, or dead languages. A wizard may buy it so he can read old grimoires and scrolls, while a tombrobber may learn it so he can decipher inscriptions on crypts and directions on ancient treasure maps. Occult texts are often written in actual code as well. (Occultists actually wrote some of the first studies of cryptography.) Kabbalists can use Cryptography as a Complementary Skill to find hidden numerological meanings in sacred texts.

Martial Arts

The use of Cryptography in a *Ninja Hero* campaign depends primarily on the time period the campaign's set in — a modern-day campaign would be like Dark Champions, while one set in ancient China would take after *Fantasy Hero.*

Pulp

In the Pulp era, codes and ciphers weren't nigh-unbreakable things created by computers, they were still primarily the product of human minds and (relatively) simple devices. This makes Cryptography a useful Skill for characters involved in espionage and military matters: by sitting down with some paper and pencils and working hard, there's a chance they can actually crack a cipher. Breaking a code probably means an adventure to steal the enemy's codebook, but what's life without a little adventure?

Of course, the Pulp era is the time of the Enigma machine and the first truly high-tech advances in cryptography (see above). Pulp PCs could easily become involved in attempts to steal (or recover) an Enigma machine or similar device, or try to use modern decryption methods to translate archaeological enscriptions that lead to treasure.

The *Translation Only* form of Cryptography is perfect for archaeologists, treasure-seekers, and other characters who like to read ancient languages or decipher treasure maps.

Science Fiction

What was said above regarding Cyberpunk-era Cryptography applies here as well. Additionally, some forms of Science Fiction open up the possibility of things like psionic codes, codes based on technologies not yet even conceived by man, alien encryption, and so on.

Superheroes

Cryptography in a *Champions* setting is usually the same as that of Dark Champions — but with the additional factor of super-technology. Thanks to the brilliance of "mad scientist" heroes and villains, some people of the twenty-first century may have encryption technology that's as advanced as that of Science Fiction times!

Western/Victorian

Some of the first modern cryptography advances (and related espionage techniques) took place during the American Civil War and might factor into campaigns taking place in this time period. In addition to using simple cipher machines, Civil War spies could tap into telegraph lines to overhear enemy messages (see *Systems Operation* for more information.) They even learned how to identify a sender's distinctive "fist" (method of sending), which sometimes allowed them to trace troop movements via primitive traffic analysis.

DEDUCTION

Type: Intellect Skill (roll: 9 + (INT/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

Deduction represents the ability to take several facts and leap to an inobvious (or at least not immediately obvious) conclusion — the classic detective's talent. It's a key Skill in games focusing on mysteries and investigations, and an Everyman Skill for all genres.

Deduction requires facts — a character can't deduce a correct end result without at least a few relevant pieces of information. Sometimes the GM supplies this information during the game in the form of clues, rumors about NPCs, and the like. In other cases the character relies upon his Skills to help him. Characters frequently use Complementary Skills with Deduction. Just about any Skill directly connected with the problem confronting the character can Complement Deduction; examples include Bureaucratics (for a mystery revolving around paperwork), Demolitions (for a mystery with a bomb as a key element), Interrogation (when the mystery revolves around grilling suspects and comparing their stories), or Streetwise (when reaching the right conclusion involves knowing who's who in the underworld).

When a character makes a Deduction roll, the GM should consider applying modifiers based on three criteria: how complex the problem the character's trying to solve is; how many discrete clues or pieces of information the character has (he typically needs at least two, and the more, the better); and the value of that information. A character who has a lot of data to work with usually has an easier time making a correct deduction than one with only a few, but a character who knows one or two important clues may be ahead of a character with a dozen less meaningful tidbits of information. The accompanying table lists suggested modifiers.

GAMEMASTERING DEDUCTION

Deduction is a flexible and powerful Skill that the GM needs to handle carefully. On the one hand, characters should get the benefit of the Skills they pay for. This is particularly true when the character is supposed to be smarter and more deductive than the person playing him. Players want to build and play characters who are deductive geniuses — it's impossible to escape the influence of Sherlock Holmes. It stands to reason that many PCs would be far better at deducing the meaning of clues than the players who play them are, and one of the reasons the *HERO System* has Deduction is to make it possible to play such characters. That means the Skill should offer a significant benefit in the game at appropriate times.

On the other hand, solving a mystery or deducing crucial information on the basis of a Skill Roll can be boring and diminish the fun of the game: "OK, I talk to everyone for a few minutes and read the crime scene reports. Now I want to make a Deduction roll to figure out who the killer

DEDUCTION MODIFIERS TABLE

Complexity Of Problem	Modifier
Very Simple	+2
Simple	+1
Average	+0
Complex	-2
Very Complex	-4
Extremely Complex	-6
Amount Of Information	**Modifier**
1 clue/piece of information (if roll allowed at all)	-5 or worse
2-3 clues/pieces of information	-1
4-6 clues/pieces of information	+0
7-9 clues/pieces of information	+1
10+ clues/pieces of information	+2
Importance Of Information	**Modifier**
1 pieces of information is important/crucial	+1
2-3 pieces of information are important/crucial	+2
4+ pieces of information are important/crucial	+3

is." That's no fun for anyone. Ideally, the *players* should figure out what the clues mean and make the deductions themselves. The sense of accomplishment that brings adds an enormous amount of fun to the campaign.

Fortunately, there are ways around this dilemma:

■ Instead of interpreting "successful Deduction roll" as "character immediately figures out all the answers," think of it as "character gains a little bit of insight toward the ultimate goal of solving the mystery." In other words, when a PC succeeds with a Deduction roll, give him an extra tidbit of information or a little help toward figuring out the answer, *not* the whole solution on a silver platter. The more he makes the roll by, the more information you give him (or the more important a hint you offer). For example, suppose the PCs are trying to figure out a riddle Anagram left behind. The answer is "Iron Curtain." If a PC makes his Deduction roll exactly, maybe the hint you provide is "Winston Churchill" (who coined the term). If he makes it by 1-3, maybe the hint is "Soviets" or "Warsaw Pact." If he makes it by 4 or more, maybe you tell him "steel drapes" or the like. In short — Deduction should help the players figure out the answer, not provide the answer for them directly.

Similarly, Deduction provides a rationale for the GM to help the players out if they get stumped. If a character succeeds with a Deduction roll, the GM can provide a gentle hint or an additional clue — something to get the players' minds working on a different, and hopefully more productive, track.

■ Look at each PC's Knowledge Skills. If a PC has a Knowledge Skill that's related to the clue, let him use the KS as a Complementary Skill. If the Deduction roll succeeds, provide more information than you otherwise would — the PC knows more about the subject, so it stands to reason he ought to have more insight on the problem.

■ Prepare for the use of Deduction in advance. If you expect the PCs to investigate a clue, prepare a list of potential answers. For each PC who makes a Deduction roll, give the players one randomly-chosen item from the list (if a character makes his roll by 4 or more, maybe he gets two items). Then let the players analyze the items they've got and figure out the right one (even if they have to check out every location on the list in person, or find every object listed). It's a lot easier to work from a list of possibilities than it is to try to pull one right answer out of the ether.

■ In the comics, television, and movies, it often seems that once a character hits on the right answer to a mystery, he instinctively knows he's right. A group of players, on the other hand, can spend hours debating the possible meaning of a clue, even if one of the ideas they had five minutes into the discussion was the right answer. To keep this from happening, try to hint at which answer is correct... or you could even go so far as to say, "Bob's suggestion sounds like a pretty good one — it seems right to you."

Looking at it another way, a successful Deduction roll doesn't necessarily mean a character's suddenly realized what the right answer is, or what's going on. It could just mean that he realizes one of the possible answers couldn't be the right one. In other words, Deduction helps him narrow down the possibilities (so the character's player can eventually reach the right conclusion) rather than giving him the right answer in *deus ex machina* fashion.

The GM may also want to consider secretly making characters' Deduction rolls himself (as discussed on page 18), then providing them with information tailored to account for the success or failure of a role. A character may *think* he's right when he deduces the answer to a problem, but he can't necessarily *know* he's right (especially if he defines his Deduction as "I make intuitive leaps of thought that I can't explain" or some similar special effect). Keeping the results of the roll hidden lets the GM create that effect of uncertainty if he wants it.

EQUIPMENT

Deduction doesn't involve equipment; it's a purely personal Skill. However, the gathering of information on which to base a Deduction roll may involve equipment (such as the devices used to collect trace evidence from a crime scene).

POWERS AND DEDUCTION

Powers normally interact with Deduction by providing even more ways for a character to gather the information he needs to make a roll. Clairsentience, Enhanced Senses, Mind Control, Mind Scan, and Telepathy, to name just a few, could all make a character's ability to acquire information, and thus succeed with Deduction rolls, much easier.

CONSEQUENCES OF FAILURE

In most cases, a failed Deduction roll indicates that the character can't think of an answer — he just doesn't have enough clues yet to put two and two together to get four. If a character fails a Deduction roll badly (by 4 or more) it usually



means an *incorrect* Deduction: the character has reached a conclusion, but it's wrong... and of course that often means trouble.

BASE TIMES

A flash of insight or logic that provides the answer to a mystery can come in a split-second — but what really matters is how long it took the character to get to the point where he consciously or subconsciously had enough facts from which to make that intuitive leap. First, a character has to gather those facts; that may take a long time or a little, there's no way to predict beforehand. Second, once he has them, a character has to consider the facts before him, analyze them, let them roll around in his mind before he can deduce their meaning. Typically a character can do this for a Very Simple problem in 1 Minute or less; for a Simple problem, 5-20 minutes; for an Average problem, 1-5 Hours; for a Very Complex problem, 6 Hours to 1 Day; for an Extremely Complex problem, 1 Day or longer.

DEDUCTION BY GENRE

Deduction works the same in all genres.

DEFENSE MANEUVER

Type: Combat Skill (roll: N/A)
Cost: 3-10 Character Points (see text)

A character with this Combat Skill is an expert at moving while in combat. He never allows an attacker a clear shot at his back. Defense Maneuver's effectiveness depends on how many Character Points a character spends on it (see below).

USING DEFENSE MANEUVER

Defense Maneuver requires a Half Phase Action to use (unless the character buys it up to level IV). A character can also make a Half Move or attack in the same Phase he uses Defense Maneuver, for instance.

When performed, Defense Maneuver offers several benefits, depending upon how many points the character spent on it (see below). Characters must buy the levels of Defense Maneuver in order; for example, they cannot buy Defense Maneuver III without first buying levels I and II. Thus, full Defense Maneuver costs 10 Character Points.

Defense Maneuver I (3 Character Points)

At this level of Defense Maneuver, no attacker is considered to be attacking "from behind."

Defense Maneuver II (+2 Character Points)

This level of Defense Maneuver eliminates the Multiple Attacker Bonuses as to attackers the character can perceive.

Defense Maneuver III (+3 Character Points)

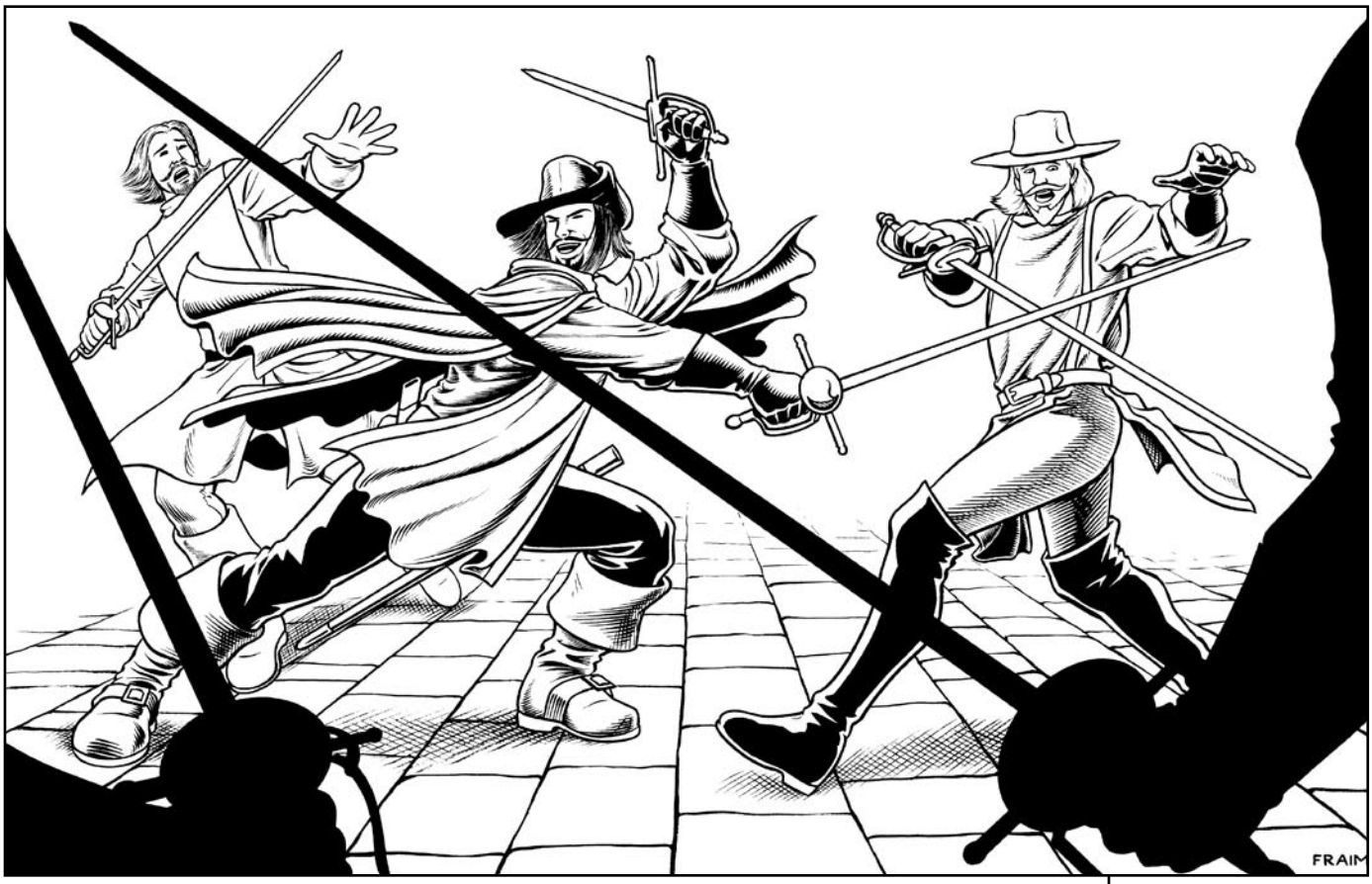
This level of Defense Maneuver eliminates Multiple Attacker Bonuses to all attackers, even those which the character cannot perceive. However, Defense Maneuver III does not allow a character to perceive said attackers — it simply means that the way he moves in combat, no one can get a clear shot at his back, regardless of whether he knows they're there. For example, he'd still suffer the reduced DCV that comes from being attacked by a foe he couldn't perceive with a Targeting Sense, but that foe wouldn't get a Multiple Attackers Bonus or bonus for attacking him "from behind."

Defense Maneuver IV (+2 Character Points)

At this level, Defense Maneuver functions as a "Sense" — in other words, a character doesn't have to spend a Half Phase to use his Defense Maneuver (using it takes no time).

Defense Maneuver IV also means that any Combat Skill Levels that improve the character's DCV are considered Persistent for this purpose. This primarily refers to CSLs bought only to improve DCV ("DCV Levels"), but it also applies to other types of CSLs that the character currently has assigned to DCV. If the CSLs are already assigned to OCV or something other than DCV, they do not, under any circumstances, also apply to the character's DCV, because they've been assigned elsewhere. And of course no CSLs apply when a character is asleep, unconscious, or the like.

Defense Maneuver IV does not negate the penalties for being unable to perceive an Invisible attacker. The character has the normal DCV he'd



have against an Invisible attacker. However, the Invisible person cannot get any further bonuses for attacking from behind (assuming the GM would bother to grant any anyway).

Neither Defense Maneuver IV nor any other level of the Skill makes Combat Luck Persistent.

EQUIPMENT

Defense Maneuver doesn't involve any equipment; it's a purely personal Skill. However, in some instances the GM might consider buying it for some types of equipment. For example, an agile or highly-maneuverable Vehicle might take this Skill, perhaps with the *Requires A Combat Driving/Piloting Roll* Limitation. This represents the fact that they're designed and built so that they have no clearly definable "back," making this Skill appropriate without any such Limitation, or can maneuver so easily that getting a Surprise Move bonus for attacking them from behind is difficult.

POWERS AND DEFENSE MANEUVER

Defense Maneuver is a good purchase for characters whose powers allow them to "change facing" easily or the like. For example, a teleporting character might have the power to change his orientation so quickly and subconsciously that attackers can't take him at a disadvantage.

Similarly, a metamorph with a fluid body type, or the ability to sprout extra eyes or limbs in various directions, might buy Defense Maneuver to represent how he uses those abilities in combat. For example, if an attacker slams a shapechanging metamorph up against a wall, rather than taking time to turn around he may simply change shape so that what was in front is now in back, and vice-versa — thus denying other attackers the ability to hit him "from behind." In effect, the character has no "behind" to attack because of the way he can alter his form.

BASE TIMES

The standard time for using Defense Maneuver is a Half Phase, as described above. Characters with Defense Maneuver IV can use it without taking any time.

UNIFYING DEFENSE MANEUVER

For some campaigns, the odd cost structure of Defense Maneuver may not work well. As an alternative, you can convert it into a standard Agility Skill with a 9 + (DEX/5) roll. Using Defense Maneuver I requires a standard Skill Roll (the roll itself takes no time, but the Skill still requires a Half Phase to use). To use Defense Maneuver II, the character must make his roll at a -2 penalty; for Defense Maneuver III at a -4 penalty; for Defense Maneuver IV at a -6 penalty. This form of Defense Maneuver IV can only make DCV Levels Persistent for 1 Hour (or some other timeframe chosen by the GM); to extend the effect beyond that time the character has to make another roll.

DEFENSE MANEUVER BY GENRE

Defense Maneuver works the same in all genres. It's more common in genres where characters engage in a lot of HTH Combat and can expect to face a lot of lower-powered foes on occasion, such as martial arts or swashbuckling.

DEMOLITIONS

Type: Intellect Skill (roll: 9 + (INT/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

A character with Demolitions can use explosives (and incendiary devices and other related devices) properly. He can handle explosives safely, create explosive devices, set them, arm them, and if necessary defuse/disarm them. He can examine a bomb for "booby traps" or other countermeasures, and if he finds them can remove or bypass them as part of the overall disarming process (though the GM may sometimes require him to use Security Systems instead or in addition).

Demolitions grants a character knowledge of the different types of explosives, their properties, how to use them, and what sorts of jobs they're best for. He can gauge the type and amount of explosives necessary to destroy a structure (or accomplish some other purpose appropriate to the use of explosives). He knows where to plant explosives for maximum effect.

DEMOLITIONS MODIFIERS

Explosive	Modifier
Black powder	+1 to +3
Ammonium picrate	-0
ANFO	-0
Dynamite (TNT; *q.v.*)	+1 to +2
Foam explosive	-0
HMX	+1 to +2
Initiating devices	
Blasting cap	-3
Detonating cord	+1
Lead azide	-0
Mercury fulminate	-2
Nitroglycerin	-3
PETN	-1
RDX	+1 to +2
Plastique (C4, Semtex)	+1 to +2
TNT	+1 to +2
Amatol	+1 to +2
Cyclotol	+1 to +2
Pentolite	+1 to +2
Picrotol	+1 to +2
Tetrytol	+1 to +2
Torpex	+1 to +2
Incendiary	**Modifier**
Fire bottle/Molotov cocktail	No roll required
Gelled gasoline	-1
Incendiary brick	-0
Magnesium	-0
Napalm	-0
Paraffin-Sawdust	-0
Thermite	-0
Thermate	-0
White Phosphorus	-2
Other Circumstances	**Modifier**
Simple fuse	+1
Complex fuse	-1 to -4

Note: nuclear bombs are beyond the capabilities of Demolitions to build and disarm (they require specific Science Skills and the like), but the initiating explosion that triggers a nuclear bomb can be built and disarmed with Demolitions.

COMPLEMENTARY SKILLS

Characters with Demolitions often use Complementary Skills — after all, the results of failure can be lethal (see below). For creating bombs, Electronics, Mechanics, SS: Chemistry, and Security Systems could all be Complementary depending on exactly what the character wants to do. If a character wants to include a booby trap with a bomb he can benefit from using Security Systems as Complementary; if he wants to develop a whole new type of explosive SS: Chemistry helps a lot. (And of course he has to have Inventor.) Knowledge Skill: Explosives would almost always be Complementary.

If a character wants to use a bomb to destroy or damage a particular type of device, a Skill related to that device may be Complementary. Analyze Construction (or the like) makes it easier to blow up a building; Security Systems gives a character greater insight on how to destroy an alarm with an explosive.

TYPES OF EXPLOSIVES

The type of explosive or incendiary a character uses is the primary modifier to the Skill Roll, as summarized in the accompanying table. Some explosives are more sensitive or otherwise harder to work with; others, such as plastic explosives and TNT, are designed for stability and relative ease of use.

You can find descriptions of the substances and devices listed in the Demolitions Modifiers table, including how much damage they typically do, on pages 256-61 of *Dark Champions* or pages 120-25 of *The HERO System Equipment Guide*.

CREATING AND SETTING EXPLOSIVE DEVICES

An explosive device can generally be described as having four parts. One Skill Roll usually encompasses putting together all the parts, but the GM might require a character to make two or more rolls if appropriate. First, there's a *detonator,* which attaches to the *igniter.* When activated, the detonator triggers the igniter, which in turn lights a fuse or sends electricity into the *initiating device,* a small amount of powerful explosive that sets off the *main explosive.* Blasting caps and detonator cord are examples of initiating devices. Depending on the type of bomb used, the detonator could be a plunger attached to wires, a clock or sensor that activates the igniter when a certain condition occurs, or the like.

Generally speaking, creating a basic explosive device is easy if the character has the materials and tools required (pliers, a knife, and so on). In many cases the GM shouldn't even require a roll. Only if the character's trying to prepare a bomb without the right tools, when in combat or other stressful conditions, or when using a sensitive explosive should he have to make a roll.

In many ways, the trick to creating and setting explosives is not setting the charge (a task that in many cases a person can do with just a few minutes' training at most) — it's getting the desired result from the explosion. A character who doesn't do the

job right could have too weak an explosion (and thus fail to achieve his objective) or too strong an explosion (causing unintended collateral damage). See *Consequences Of Failure,* below, for details.

Enhancing Explosives

At the GM's option, a character who succeeds with his Demolitions roll can improve the performance of the explosives he uses. For example, the GM might rule that for every point the character makes the roll by, he can add 1 Damage Class to the force of the explosion. If the character makes a particularly good roll, say by 5 or more, the bomb might become Armor Piercing. The GM decides whether to allow such bonuses, and if so how they're obtained and how they work.

DISARMING EXPLOSIVE DEVICES

For many characters, the primary use of Demolitions is to disarm bombs and other explosive devices. This often involves deft work with the hands as much as knowledge of the device. At the GM's option, a character may (or may have to) make his Demolitions roll based on DEX rather than INT when it comes to doing things like snipping the right wire or manipulating the bomb's inner workings without setting it off.

In the "real world," disarming or disabling and explosive device is usually easy — something a character with Demolitions can do without a roll, and even something an untrained character may be able to figure out quickly. But it becomes a tricky proposition if the bomb has anti-tampering devices — "booby traps" in common parlance. A booby trap is designed to set of the bomb if anyone tries to disarm it. Disabling the bomb thus becomes more a matter of disabling the booby trap than disabling the explosive device itself.

To determine if an explosive device has a booby trap, a character must examine it and make a Demolitions roll. The roll is usually unmodified, and may not even be necessary if the bomber wants people to know about the trap and makes it obvious. Disabling the booby trap then requires a separate, often heavily-modified, roll. In most cases, Security Systems is a Complementary Skill both for (a) determining whether there's a booby trap, and (b) disarming booby traps. If possible, it may be easier and safer to detonate a booby-trapped bomb in place rather than try to disarm it... but of course that's often not an option.

In a gaming context, the dramatic reality of most gaming campaign settings dictates that bombs are usually going to be booby-trapped. Disabling the device usually involves a Demolitions Versus Demolitions Contest between the bomber and the PC trying to stop the bomb from working, with appropriate modifiers for the type of explosive and other factors; if that's not applicable, the GM can use the stock modifiers in the accompanying Booby Trap Table to determine the penalty for disarming a bomb. See *Consequences Of Failure,* below, for some discussion of what can happen if characters fail their roll to disarm bombs.

BOOBY TRAP TABLE

Type Of Booby Trap	Modifier
Simple	-0
Average	-1
Complex	-2
Very Complex	-4
Extremely Complex	-6
Devilishly Complex	-8

EQUIPMENT

As discussed above, Demolitions requires equipment — not only the explosive or incendiary in question but the tools to work with it. A character who lacks the right tools suffers the standard penalties for that (see page 33), but typically at the upper end of any range involved. Advances in equipment have made some tasks, such as disabling or moving bombs with remote-controlled "robots," much safer (if not easier).

POWERS AND DEMOLITIONS

Telekinesis may be the ultimate Power for disarming bombs, since it lets a character work on one without having to get close to it. However, this requires Fine Manipulation, and possibly Telescopic for the Sight Group so the character can clearly perceive what he's doing. Characters can often use other powers, such as Entangle or Force Wall, to mitigate the effects of an explosion.

CONSEQUENCES OF FAILURE

The effects of failing a Demolitions roll depend on what the character was trying to do: set off an explosion, or prevent one.

Setting Explosive Devices

If a character fails his Demolitions roll to make or set off an explosive device by 1-3, usually all that means is the bomb doesn't work. The character can try again subject to the usual rules for repeated Skill attempts. If he fails the roll badly (by 4 or more), several possible negative consequences could result.

First, the bomb could detonate too early or too late. For really bad failures this often means it goes off right in the character's hands, inflicting possibly fatal injury. But the GM should choose a result that's dramatically appropriate and conducive to the fun of the game. Sometimes it makes more sense for a bomb to be a dud than for a character to die just because of a botched throw of the dice.

Second, the bomb could have too weak an explosion and thus probably not do the job it was designed for properly. For each point the roll fails by, reduce the bomb's damage by -1 Damage Class, the radius of the explosion by 1", or the like.

Third, the bomb could have too strong an explosion. This should only apply as a result of failure in situations where it could have significant negative impact on the characters and their environment; they shouldn't be able to do more damage to their enemies by failing a roll. Typically this result works best when the characters have to blow up Structure X and don't want to damage nearby Structure Y. For each point the roll fails by, increase

the bomb's damage by +1 Damage Class, the radius of the explosion by +1", or the like.

Disarming Explosive Devices

A failure when disarming an explosive device usually worries a character more than one when setting it, since that's more likely to result in a big ka-boom that separates a character's component parts in a swift and bloody fashion.

If the character's trying to find out if there's a booby trap on a bomb, failure by 1-3 means he doesn't spot one (if it exists) or can't be sure there isn't one (if one does exist). A bad failure (by 4 or more) means he's convinced there's one when there isn't, or that there isn't one when there is.

When the character's actually trying to disarm a bomb, failure by 1-3 means he can't do it — the bomb remains primed and ready to explode. He can try again subject to the usual rules for repeated Skill attempts. A bad failure (by 4 or more) usually means the feared result of causing the bomb to go off right then and there. If the GM prefers not to subject characters to that cruel fate, a bad failure can have some negative consequence that makes a second roll to disarm harder. For example, the timer on the bomb might suddenly go into fast-forward mode (reducing the 30 minutes the character had to do the work to, say, one minute) or the character might "jiggle" the booby trap, making it even more sensitive (and thus increasing the penalty for the next roll to disarm the bomb).

BASE TIMES

Demolitions tends to be time-consuming, painstaking work. For creating an explosive device from scratch, the Base Time is 1 Hour, though building a truly complex bomb may take much longer. Setting an explosive device and triggering it usually requires at least 1 Turn, if not more time; the complexity of the device and the task determine the Base Time. For example, preparing a building for demolition and rigging the explosives in the right order throughout the structure can take weeks or months even though the actual act of triggering the resulting explosion requires just the press of a button.

Examining a bomb to determine if it has a booby trap requires a Full Phase Action. Disarming a bomb usually has a minimum Base Time of 1 Turn. At the GM's option, that Base Time applies only to a Simple booby trapped-device; it increases by a minimum of +1 Turn for each step down the Booby Trap Table from "Simple."

SUBDIVIDING DEMOLITIONS

If desired, you can subdivide Demolitions into two distinct Intellect Skills, *Setting Explosives* and *Disarming Explosives.* In some ways this actually mirrors real-world experience nicely, since personnel trained to set up explosives and trigger them aren't necessarily trained in explosive ordnance disposal (EOD), which is what bomb squads know how to do.

DEMOLITIONS BY GENRE

Demolitions has no applicability in pre-gunpowder societies, such as most Fantasy games. Primitive gunpowder is described in Chinese texts as early as circa 850 AD, though the Chinese didn't necessarily use it for weapons at first, but for firecrackers and the like. In 1044 Ceng Gongliang published three recipes for gunpowder. By the early 1200s the Chinese used bombs that relied on shrapnel; earlier attempts at explosive weaponry depended mainly on the loud noise for effect. A few decades later Roger Bacon became the first European to describe gunpowder in writing, though his work wasn't published until 1733; a Syrian text describing it appeared in 1280, and there's Japanese artwork showing a bomb exploding that dates from 1292.

The first modern explosive, dynamite, was patented by Alfred Nobel in 1867 in Britain and in 1868 in the United States; it derived from his work with nitroglycerin beginning in the early 1860s. (Nitroglycerin itself was invented by Ascanio Sobrero in 1846.) In 1876 he patented blasting gelatin. The related explosive TNT was invented in 1863 by J. Wilbrand. The earliest plastic explosives predate World War II, and during and shortly after that war many others (including C4) were developed. Semtex, a form of plastic explosive popular with criminals and terrorists, was invented in 1966 in Czechoslovakia.

Future developments in explosives, such as might be found in Cyberpunk or Science Fiction campaigns, could further increase the effectiveness and safety of working with them. For example, in a *Star Hero* campaign characters might have access to lightweight and massively powerful antimatter explosives that contain antimatter in a magnetic bubble, then trigger an explosion by shutting off the bubble and letting antimatter and matter come into contact.

Fantasy

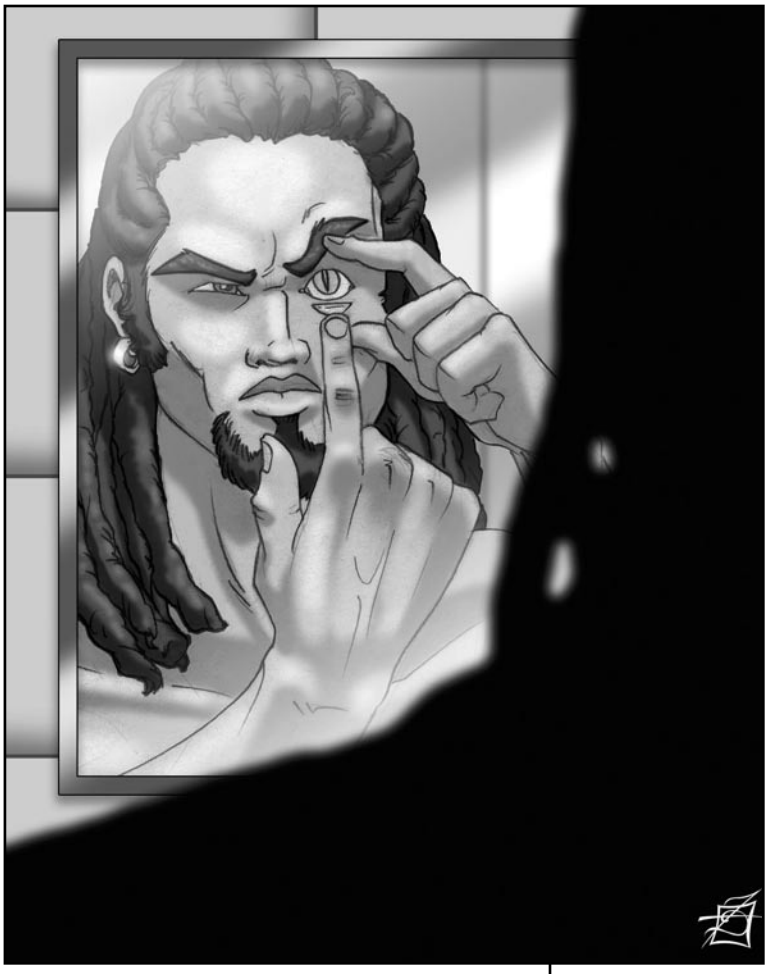
In games set in the early gunpowder era, this Skill is often renamed *Sapper,* to highlight the Skill's primary use (in siege warfare) or *Gunsmith* (in conjunction with the appropriate *Weaponsmith* Skill).

DISGUISE

Type: Intellect Skill (roll: 9 + (INT/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

This Intellect Skill allows a character to change his appearance with makeup, costumes, body language, facial expression, and the like. He knows about the different types of makeup and other equipment used to create disguises, how to apply/use/remove them, and so on. The character knows something of the history of the art of disguise, including who's who both historically and currently in the world of changing one's appearance.

Disguise alone isn't enough to pull off a perfect impersonation — all it does is let a character make himself look like someone else. To act like someone else requires Acting; imitating someone else's voice requires Mimicry. All sorts of Skills, including AKs and PSs, may be Complementary to Disguise if they provide the character with information about a person he's trying to impersonate. Cramming can be helpful in this regard; it lets a character "study up" on someone extensively and take a KS specifically about him so he can more easily pass himself off as that person. Forgery (Documents) helps a character create a fake "paper trail" to support his false identity.



USING DISGUISE

The primary uses of Disguise include changing a character's appearance, making a character look like a specific other person, creating fake injuries, hiding Distinctive Features, changing clothes quickly, and improving Comeliness. The character can apply disguises either to himself or to other characters.

Altering Appearance

First and foremost, characters use Disguise to alter their appearance. Typically they want to make themselves look different so they can hide from someone or something, avoid drawing attention to themselves, or the like. In this case, the disguise doesn't have to look like anyone in particular; it may involve only a few cosmetic changes (the addition of a fake scar or glasses, altering hair color), but it could be a complete makeover. In other cases the character doesn't want to look like any specific person, but like a "generic" member of a particular group — a cop, an orc, an Imperial Star Marines sergeant. In that case the disguise often requires more effort; the character has to make sure his clothing, mannerisms, haircut, and the like conform to those of the group. This involves research and preparation that aren't necessarily required for just changing one's appearance.

"Realistically" it's often harder for a person to apply a disguise, particularly an elaborate one, to himself than to put it on another person. (In some cases a character might even need to have Contortionist to do things like apply skin dye or stippling to his own back.) In "realistic" campaigns the GM may rule that a character putting a disguise on himself cannot use a roll higher than 13- no matter what his Skill Roll normally is or what modifiers apply. In cinematic campaigns none of this is a concern.

A character can also use Disguise to remove elaborate disguises without damaging them so the pieces can be re-used again. (People without Disguise just have to rip them off, ruining them.) This requires one-fourth the Base Time as applying the disguise and a Disguise roll. If the roll succeeds, the "parts" of the disguise are in good enough condition to use again (perhaps with a bit of touch-up); if it fails, they're ruined.

Impersonating People

The most difficult task performed with Disguise is to make a person look like another specific person. This is the height of the disguise artist's art, and thus more likely to expose him to discovery if he's not careful. Doing this involves a minimum -1 to -3 penalty (and often more) that the GM determines by assessing several factors. First, how closely do the character being disguised and the person being imitated resemble each other? The Disguise Modifiers table accounts for things like gender, size, species, and the like; these are in addition to the "impersonate a specific person" penalty. What the GM should consider here are more specific aspects of appearance, such as build, hair and eye color, facial structure, and the like. Second, how well does the observer know the person being imitated? Fooling an observer who knows the

DISGUISE MODIFIERS

Body Type	Modifier
Age	
1-2 decades younger than character	-2
3-4 decades younger than character	-5
5 or more decades younger than character	-9
1-2 decades older than character	-1
3-4 decades older than character	-3
5 or more decades older than character	-6
Gender: disguised as different gender	-2 or more
Limbs	
More limbs	-1
Fewer limbs	-2
Posture	
Similar posture	-0
Semi-Erect	-1
Horizontal posture	-2
Size, Weight	
Smaller than character	-2
Less than half character's mass	-3 per halving
Larger than character	-1
More than twice character's mass	-2 per x2
Significantly lighter weight than character	-4
Skin	
Body covered with hair or feathers	+1
Body covered with shell	+2
Bare skin	-1
Miscellaneous	
Distinctive scent or other emission	-2
Amorphous blob	-4
Different home environment	-2
Other Circumstances	**Modifier**
Character disguises self as specific other person: observer's familiarity with other person	
Not Familiar	-1
Somewhat Familiar (acquaintance)	-2
Familiar (friend)	-3
Very Familiar (good friend, significant other)	-5
Extremely Familiar (spouse)	-7
Character must maintain disguise for...	
Several days	-1
1 Week to 1 Month	-2
Over 1 Month	-3 (or more)

subject well is very difficult, but someone who doesn't know him may not be much harder to deceive than with a general disguise.

False Injuries

Creating a realistic-looking false injury, typically for use in combat medic training, movie special effects, and the like, is somtimes referred to as *moulage.* In game terms, a fake injury may allow a character to trick an opponent into getting close enough for the character to make a sneak attack, bolster a standard disguise, and so on.

Concealing Distinctive Features

A character can use Disguise to change or conceal many types of Distinctive Features (such as scars). If so, the Feature usually qualifies as "Concealable With Effort." The GM determines what Distinctive Features the Skill can affect, and to what extent.

Quick Clothing Changes

Disguise allows a character to change his clothes rapidly (this assumes he has something to change into, but most characters with Disguise prepare for such eventualities). Typically this takes 1 Turn; changing clothes in 1 Phase imposes the standard -3 penalty for performing Skills more quickly than normal. If the clothing being changed into or out of is elaborate, there's a -1 to -2 penalty; if it's extremely elaborate, the penalty rises to -3 or more.

Increasing Comeliness

Part of Disguise involves applying makeup and knowing how to present a particular appearance, and sometimes that involves making a character look better. (In fact, that's often the entire point of putting on makeup.) A character with Disguise can use it specifically to improve his Comeliness as long as his makeup remains unmarred. If he makes the roll by 1-3, he can add +1 COM; if he makes it by 4 or more he can add +2 COM. Once his makeup is removed (either on purpose or not) the COM bonus fades.

Manufacturing Disguise Materials

Characters with Disguise know how to make various items used as parts of disguises, such as wigs, fake scars, fake wounds, and the like. (This does not include animatronic pieces; that requires Electronics, with Disguise as a Complementary Skill.) Sometimes this is simply and quickly done (such as making a fake moustache out of crepe hair) but doesn't always look so good (and thus imposes penalties on the Disguise roll to change appearance). At other times it can take many days (such as making the same moustache with real hair attached to lace) but looks much more realistic (and can be reused more).

Creating a disguise item requires a Disguise roll with a Base Time listed in the Disguise Times table. (For longer tasks, characters usually break them up over time, putting in a few hours or days here and there until the work's done.) If the roll succeeds, the character has the item in question. If it fails he does not; if it fails badly, he thinks he's created a proper item when in fact it's obviously fake to anyone else.

To a limited extent, Disguise also allows a character to sew, equivalent to having PS: Sewing 8-. More skilled disguise artists buy PS: Sewing as a separate Skill.

SENSES

Disguise typically changes a character's appearance — in other words, how he's perceived by the Sight Group Senses. Changing a character's voice (how he sounds) requires the *Mimicry* Skill (see later in this chapter), not Disguise. How a character smells can be changed with Disguise at a -2 modifier. How a character feels to the touch can be changed with Disguise, though this may require elaborate full-body makeup and prosthetics that take hours to apply. Disguise cannot change how a character tastes if something decides to eat him, nor can it change how he's perceived by Radio or Mental Group Senses.

MODIFIERS

A character who wants to disguise himself to look like a member of another species or race may run into problems. It's hard for a two-armed, six foot tall human to make himself look like a four and a half foot tall dwarf, a six-armed serpent-man, a blue-skinned, antennaed merchant from Rigel IV, or even just a human being who's missing an arm. Similarly, differences in age, gender, or size, or the need to maintain a disguise for a long period of time may make it easier to see through. The Disguise Modifiers table lists applicable modifiers — though not every genre or campaign is so "realistic" as to require them.

SEEING THROUGH A DISGUISE

To spot someone wearing a disguise, an onlooker must make a PER Roll in a Skill Versus Skill Contest against the character's Disguise. (A character with Disguise can choose to use it instead, or can make it as a Complementary Skill Roll to his PER Roll.) Standard modifiers to the PER Roll, like the Range Modifier, apply; thus, disguises tend to hold up better at a distance and in poor lighting. A disguise can also be exposed accidentally if it's damaged, part of it comes off, or the like. For this reason clever characters don't put more into a disguise than they have to — the more elaborate a guise, the easier it is for someone to accidentally mar it.

Damage To Disguises

If a disguise involves makeup, prostheses, wigs, fake beards, or other physical components, those things can get damaged or knocked askew if the character's attacked. When an attack that can do BODY damage (whether the character actually suffers any or not) strikes a Hit Location where a character's wearing a disguise (or part of it), the GM should make a roll. If 1 BODY is rolled for the attack, it has an 8- chance to affect the disguise in ways that reveal what it is. For each +1 BODY rolled, increase the roll by 1. If the roll succeeds, the attack damages the disguise in some way, knocks it off, or the like. If it fails, the disguise remains in place, unharmed.

EQUIPMENT

Disguise requires equipment in the form of makeup, prostheses, wigs, changes of clothing, fake moustaches and beards, and the like, plus of course anything necessary to apply the equipment to the person properly (such as a mirror to look in). Improvising a disguise with makeshift equipment, or without any significant equipment, is very difficult; GMs should strictly apply the standard equipment modifiers (page 33).

POWERS AND DISGUISE

All sorts of Powers may make a disguise more effective, or even remove the need to use the Skill. Shape Shift, particularly with the *Imitation* Adder, allows for nigh-foolproof disguises created in the blink of an eye ("super-skill" versions of Disguise are often built using Shape Shift with the Limitations *Extra Time* [to activate] and *Requires A Disguise Roll*). Similarly, Images can make a character look like someone else easily. The "Instant Change" power created with Transform allows a character to be a "quick-change artist" who can swap sets of clothing at lightning speed.

DISGUISE TIMES

Type Of Disguise	Base Time*	Examples
Very Simple	Full Phase	Applying a pre-made fake moustache
Simple	1 Turn	Applying several pre-made fake articles
Average	1-19 Minutes	Quick but thorough general change of appearance involving fake articles, facial makeup, and clothing
Elaborate	20-59 Minutes	Thorough general change of appearance including multiple small prostheses and the like
Very Elaborate	1-5 Hours	An almost-complete change of appearance involving multiple large prostheses and the like
Extremely Elaborate	6+ Hours	Full-body prostheses, full-body makeup, complete change of appearance

Article Of Disguise	Bast Time To Manufacture
Beard, fake (Simple (-1 to Disguise roll))	20 Minutes
Beard, fake (Well-Made)	1 Month
Cast, fake	1-3 Hours
Facial appliance (fake nose, alien nose- or head-ridges)	1-3 Hours
Humpback	1 Hour
Limb, extra	6 Hours
Moustache, fake (Simple (-1 to Disguise roll))	5 Minutes
Moustache, fake (Well-Made)	1 Week
Scar, Small	20 Minutes
Scar, Large	1 Hour
Wig (Simple (-1 to Disguise roll))	1 Day
Wig (Well-Made)	1 Month
Wound, Small	1 Hour
Wound, Large	3 Hours

*: The more often a character applies a particular disguise, especially to another person, the quicker it often becomes. After 20 applications of the same disguise, reduce the Base Time required to apply it by half. After 100 applications, reduce that amount in half again.

CONSEQUENCES OF FAILURE

Typically a failed Disguise roll means the disguise won't work if closely inspected (*i.e.,* if someone tries to make a PER Roll to see through it, touches it, looks at the character closely, or the like). The character knows this, but may choose to keep the disguise on in the hopes it fools some people anyway. A badly failed roll (by 4 or more) means the character *thinks* the disguise works well but in fact it's obviously a disguise to most people even without a PER Roll. Alternately, it may mean the character botched things so badly he's run out of supplies and can't make another Disguise roll for a day or more.

BASE TIMES

A few disguises are spur-of-the-moment things (like putting on a fake moustache), but the best ones require hours of preparation. The accompanying Disguise Times table lists suggested Base Times based on the elaborateness of the disguise; it also lists suggested times for manufacturing various prostheses, appliances, molds, and other things used to change one's appearance. In "realistic" campaigns GMs may want to increase these times.

SUBDIVIDING DISGUISE

In a campaign setting featuring multiple sentient humanoid races, such as many Fantasy and Science Fiction campaigns, GMs may prefer that characters buy Disguise by species. For 2 Character Points a character can buy an INT-Based Roll to disguise himself or others as members of a single species (typically his own). For every +1 Character Point he can buy the ability to create disguises based on another species. He can try to use Disguise to make someone look like a species he hasn't purchased at a -4 penalty.

Another possible scheme for splitting up Disguise is to divide it into three distinct Intellect Skills: Manufacture Disguise (the ability to make wigs, fake scars, fake limbs, and the like); Apply Disguise (the ability to put a disguise on one's self or others to change appearance); and Makeup (the ability to apply cosmetics to enhance Comeliness).

DISGUISE BY GENRE

Fantasy

In Fantasy settings, magic often takes the place of Disguise or augments mundane disguises. A character who can change shape naturally, or who knows spells to accomplish that, can often disguise himself well enough to fool even close friends of the person being imitated. The only way to prove that it's a disguise is to trick the disguised character into saying something the person he's imitating wouldn't, or to reveal ignorance of something that person knows about.

Pulp

Disguise is probably the most ubiquitous non-combat skill used by Pulp heroes. Most of them, including pretty much every hero of a single-character pulp, were experts at changing their appearance and impersonating others. (Obviously Acting and Mimicry were also often involved.) Typically a Pulp character could create a foolproof disguise with only a few basic supplies and a few minutes (or seconds) of work, so it's perfectly appropriate for GMs to dispense with most modifiers and let characters disguise themselves quickly and easily. Gamemasters desiring greater "realism" should consult the Disguise Modifiers Table.

Science Fiction

Advanced prosthetics, high-tech surgery, artificial flesh, and smart materials make Disguise easier, but characters in a *Star Hero* game may need to disguise themselves as weird aliens or variants of their own species (see the Disguise Modifiers table).

ELECTRONICS

Type: Intellect Skill (roll: 9 + (INT/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

Electronics allows a character to identify, understand, build, repair, and rewire electronic devices and their component parts. It covers a vast range of technology — from simple radios to interplanetary teleporters. A character with Electronics knows how electronic devices work, how to design and build them (from creating the circuit diagrams and such all the way up to properly assembling the components to create a finished, functioning device), how to fix and modify them, and how to deduce their function and operation. He knows about the types of tools and technology used to perform Electronics-related tasks, and how to use them. He's aware of the general history of electronic devices and how electronics technology has developed over time.

Technology-related Skill modifiers — including damage to subject, equipment, advanced/obsolete/alien technology, and technological compatability — play an important role with Electronics. It's easy enough for a character to create or modify a device similar to those he's used to working with; it's another matter entirely to try to repair a heavily-damaged device on a tight deadline, or to try to determine the purpose and workings of an electronic gadget that's nothing like anything the character's ever seen before.

COMPLEMENTARY SKILLS

Despite general references to "electronic devices" throughout the description of this Skill, Electronics isn't always the primary Skill a character uses to work on an electronic device. Electronics often functions as a Complementary Skill when the device the character's working on is covered by another Skill. This includes Bugging, Computer Programming, Security Systems, and Systems Operation, but can also extend to other Technological Skills as appropriate. For example, if a character wants to build an electronic listening device, he uses Bugging as the primary Skill with Electronics as a Complementary Skill; if he's building a communications system or a sensor, Systems Operation is primary, Electronics Complementary. If the GM feels the most important aspect of the work is the character's general knowledge of electronics systems, he may want to reverse the relationship.

You can apply the rules below for Electronics generally to other Skills that involve working with electronic devices, such as Bugging and Systems Operation, unless their descriptions in this chapter have different or more specific rules. For example, if a character wants to use his Computer Programming to disable a computer, just apply the rules and modifiers from *Disabling Electronic Devices,* below.

Various Science Skills (especially SS: Electronic Engineering and sometimes SS: Physics) are Complementary to Electronics in many situations.

Uses Of Electronics

Electronics has five primary uses: creating and maintaining electronic devices; modifying electronic devices; disabling electronic devices; identifying the purpose and nature of strange electronic devices; and operating electronic devices.

BUILDING AND MAINTAINING ELECTRONIC DEVICES

First and foremost, a character with Electronics can design and build electronic devices. He may have to start from scratch, sketching out a circuit diagram and then creating the circuits, or he may put together pre-made circuit boards and system components to create a finished device. Similarly, he knows how to maintain electronic devices in good working order, and how to repair them if they malfunction or become damaged. Of course, to invent all-new electronic devices, the character also needs the *Inventor* Skill (page 206); Electronics by itself doesn't allow a character to invent new gadgets, though it does let him build one he already knows about.

The GM can take either of two approaches when determining how easy it is for a character to build an electronic device. First, he can have the character write up the device using the *HERO System* rules, then apply a penalty of -1 per 10 Active Points in the device to the Electronics roll to create it. A second (and more simple) approach is to assign the device a complexity rating using the accompanying Device Complexity table and derive the modifier from that. In either case, the modifier is in addition to any applicable modifiers from Chapter One, mentioned above.

If the GM requires characters to make Electronics rolls periodically to maintain their gadgets, typically that roll suffers no modifier based on Active Points or the like. It may still suffer modifiers for things like not having the right tools or working with alien technology.

Repairing And Modifying Electronic Devices

Related to building electronic devices is repairing them. During the course of a character's adventures his gadgets may be smashed, burned, electrocuted, set on fire, teleported to Dimension X, buzzsawed, bent, folded, spindled, and mutilated — so sooner or later they're going to need a little patching up. To determine the difficulty of making repairs, the GM should decide how damaged a device is — in game terms, what percentage of its BODY it's taken as damage. For each 10% (or fraction thereof), impose a -1 penalty on the Electronics roll to make repairs. (This penalty replaces the standard "damage to subject" penalty.) The GM can modify this as he sees fit to reflect the ease or difficulty of a particular repair. At the GM's option a character may be able to diminish the penalty by splitting the work into discrete tasks, each task encompassing only part of the repairs and requiring a separate roll.

Modifying an electronic device — changing it to alter or improve its function — works similarly to building one. The character should write up the two devices in *HERO System* terms, then subtract the Real Points of the existing device from those of the modified/improved device. If the total is 0 or less, then typically he suffers no penalty to his Electronics roll (unless the GM chooses to impose one). If it's greater than 0, then for each 10 Real Points (or fraction thereof) by which the modified/improved device exceeds the existing device the roll suffers a -1 penalty.

DEVICE COMPLEXITY

Complexity Of Device	Modifier
Very Simple	+2
Simple	+1
Average	+0
Complex	-2
Very Complex	-4
Highly Complex	-6
Incredibly Complex	-8

DISABLING ELECTRONIC DEVICES

A character can use Electronics to turn off or disable electronic devices or otherwise prevent them from functioning. (Of course, this assumes he wants to do so without significantly damaging the device — anyone can disable a gadget without making a Skill Roll simply by smashing it to bits, blasting it with a shotgun, embedding an axe in it, or the like.) Typically a roll to disable a device suffers a penalty equal to -1 per 10 Active Points in the device, but the GM should adjust that penalty downward as necessary. Just because a device is powerful or technologically sophisticated doesn't mean it's tamper-proof.

IDENTIFYING ELECTRONIC DEVICES

During the course of his adventures it's possible that a character with Electronics will encounter an electronic device he doesn't instantly recognize or understand. (This is particularly likely in Science Fiction and dimension-hopping campaigns where characters frequently find alien gadgetry.) In that case the character can make an Electronics roll to identify the nature and purpose of the device: "This is some sort of communications system, but apparently not for vocal speech the way we Humans understand it"; "This is a weapon. That part there is some sort of pulson beam generator; looks like a pretty powerful one, too." Modifiers for obsolete/advanced and alien technologies apply.

OPERATING ELECTRONIC DEVICES

Once a character has identified the nature and purpose of a strange electronic device, he can make an Electronics roll to figure out how to turn it on and/or operate it. (Though again, as discussed above, if another Skill, such as Systems Operation, directly covers the device in question, it's the primary Skill and Electronics is Complementary.) Modifiers for obsolete/advanced and alien technologies apply, and the GM may also impose a penalty based on the device's Active Points if desired.

Characters can also use Electronics to turn on an electronic device or system for which they don't have the proper key (or other activating device) without necessarily operating it. For example, a character would use Electronics to hotwire a car.

Other Rules

EQUIPMENT

Electronics requires equipment. A character needs all sorts of tools, potentially ranging from simple ones like screwdrivers to ohmmeters and other sophisticated analyzers, to create, work with, and modify most electronic devices. As technology advances and becomes more "user-friendly," the number of tools needed may decrease, though the ones still required likewise become more advanced.

POWERS AND ELECTRONICS

The power to control electronic devices (particularly computers) is known as *cyberkinesis.* Cyberkinetic powers, such as those described in *The UNTIL Superpowers Databases,* allow a character to operate and modify electrical systems without the need for tools. In many cases a cyberkinetic character doesn't even need to touch an electronic device to manipulate it.

CONSEQUENCES OF FAILURE

The consequences of failing an Electronics roll depend largely on what a character was trying to do.

When a character tries to build, repair, or modify an electronic device, a failed Skill Roll means he doesn't get the job done. He can't figure out how to build the gadget, his repairs don't fix the problem, and so on. Alternately, the device may work... at first. Soon it malfunctions, undoubtedly at a very bad moment for the character. A badly-failed roll (by 4 or more) often indicates that his efforts have made the situation *worse:* while working he breaks a crucial tool or hurts himself; his repairs or modifications damage the device or make it work less well.

When a character tries to disable an electronic device, failure means it continues to function properly. A bad failure (by 4 or more) may accidentally activate alarms, cause the device to go into "security lockdown" so that repeated attempts to disable it become even harder, or the like.

When a character tries to identify a strange electronic device, failure means he has no idea what the device does. A bad failure (by 4 or more) means he *mis*interprets it, deciding it does something that it doesn't actually do (usually something that will get him in trouble when he tries to make the device do that).

When a character tries to operate a strange electronic device or one he lacks the key for, failure means he can't get it to work (and perhaps gets hurt by an electrical shock while trying). A bad failure (by 4 or more) means he badly hurts himself, he damages the device, he sets off an alarm, or the like.

BASE TIMES

Electronics tends to be time-consuming work. Some tasks, like hotwiring a car, may only take a few seconds, but most heavy-duty creation and modification work can take hours. For those sorts of tasks, 1 Hour per 10 Active Points in the device (or in the amount of Active Points in the modification) is a good benchmark for the GM, but he can adjust the final total as appropriate.

Disabling an electronic device usually requires a minimum of 1 Turn per 10 Active Points in the device (and sometimes longer), but again, the GM can adjust this as he sees fit. It's not uncommon for characters in the comics, action movies, and novels to shut off some devices in just a few seconds.

Identifying the nature and purpose of a strange electronic device usually requires a minimum of 1 Minute per 10 Active Points in the device. User-friendliness features may diminish the time required.

The time required for operating or activating an electronic device varies wildly. Some tasks, like hotwiring a car or turning on an alien sensor system, may take no more than 2-3 Phases, or at most 1 Turn. On the other hand, activating a large, complex system from total shutdown without the proper device or tool may take many minutes or even hours.

SUBDIVIDING ELECTRONICS

The standard rules for Electronics don't differentiate between the types of devices a character can work on — being able to fix one electronic device lets him fix any electronic device. In more realistic campaigns, characters buy Electronics in categories, using the Expanded Systems Operation Table (page 329): a category costs 2 Character Points for an INT-Based Roll (or 1 Character Point for just a subcategory); additional categories or subcategories cost 2 or 1 Character Points respectively; improving the character's roll with all of his categories and subcategories costs +1 Character Points for each +1 to the roll. The GM may want to expand the available categories based on the types of technology available in his campaign. For example, in a game with teleportation technology, Teleportation Systems might become a category characters could buy.

If you use this form of Electronics, at the GM's option a character can try to use his Electronics on a category or subcategory of devices he hasn't paid for, but he has to make his Electronics rolls for doing so at a -3 (or worse) penalty.

ELECTRONICS BY GENRE

Electronics has no applicability in pre-electricity societies, such as most Fantasy and pre-modern campaigns. Electronic devices don't become commonplace in major cities until the Victorian period, and in many parts of the world not until quite late in the twentieth century.

FAST DRAW

Type: Agility Skill (roll: 9 + (DEX/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

This Agility Skill represents the ability to ready and use a weapon quickly. It has two primary uses and one optional use. Because it's intended for use in combat, Fast Draw does not suffer the standard -1 to -3 penalty for "combat conditions" (page 33).

READYING WEAPONS

A character with Fast Draw can draw a weapon as a Zero Phase Action instead of the usual Half Phase Action. Characters must buy Fast Draw separately for each type of weapon (defined by Weapon Familiarity groups) they wish to use the Skill with — for example, Fast Draw: Common Melee Weapons, Fast Draw: Small Arms, or Fast Draw: Bows. At the GM's discretion, a character could define his Fast Draw as working with a discrete group of weapons (typically no more than six), such as "all the weapons in my Multipower."

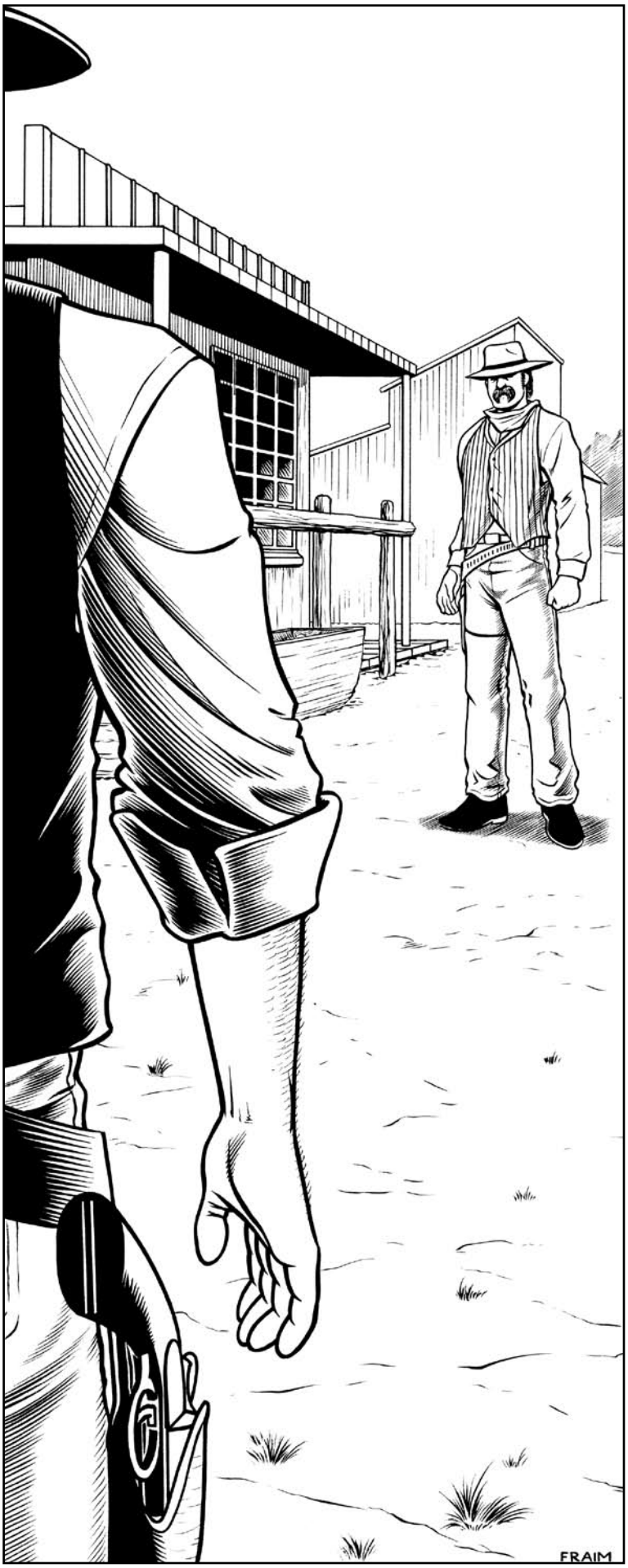
At the GM's discretion, a character can buy Fast Draw for any sort of attack, not just his weapons — a personal Energy Blast, a Martial Maneuver, or the like. Typically a character has to buy Fast Draw separately for each such ability, but he might allow a character to buy it once for a group of closely-related abilities (such as Martial Arts or all attacks in a Multipower). This is usually unnecessary, since characters don't need to take a Half Phase to activate innate abilities, but in some cases the GM might allow a Fast Draw roll to counteract Extra Time that makes a power take a Half Phase or Full Phase to activate (in the latter case, a successful Fast Draw roll reduces the activation time from a Full Phase to a Half Phase).

Weapons Preparation

Gamemasters may rule that a character cannot Fast Draw a weapon unless it's instantly or readily available. For example, a character with a strung bow or a cocked crossbow could use Fast Draw to draw and fire an arrow or bolt, but could not use Fast Draw to instantly string the bow or cock the crossbow. That's a form of weapon preparation, not "drawing" the weapon, so it means the weapon isn't "readily available" for use. However, at his discretion the GM may allow a character to make a Fast Draw roll to "prepare" a weapon (but a character cannot both "prepare" and "ready" or use a weapon in the same Phase).

Weapon Size

The standard Fast Draw rules don't differentiate between the types of weapons the Skill applies to; it can work with a dagger or derringer just as well as with a greatsword or assault rifle. In more "realistic" campaigns, this may not be appropriate. In that case, look at the "Hidden Objects" section of the Concealment table on page 134. Apply the weapon's PER Modifier as a *penalty* to the Fast Draw roll. For example, a Pistol has a PER Mod of +2 to +4, so there's a -2 to -4 penalty to Fast Draw it. (Alternately, the GM can use the more specific



PER Mods listed on the weapons tables in books like *Dark Champions* and *The HERO System Equipment Guide.*) The GM may reduce or modify the penalty as he sees fit. This system means characters have a relatively easy time quick-drawing weapons like daggers and pistols, but a harder time with larger, bulkier, or more awkward weapons.

Hidden Weapons

Sometimes characters hide a weapon on their person using Concealment, or draw a small weapon but keep it hidden from view using Sleight Of Hand. In both cases it still takes a Half Phase Action to "draw" the weapon (which in the case of Sleight Of Hand really means bringing it into play, not literally drawing it from a sheath or holster). Using Fast Draw to eliminate this penalty requires a roll at -1... but at the GM's option, if the character succeeds he gets +1 OCV on his first attack with it to represent the surprise factor of having a hidden weapon suddenly appear in his hands.

Other Modifiers

The GM can impose other modifiers on a Fast Draw roll to ready a weapon as he sees fit. If the amount or style of a character's clothing would get in the way of drawing a weapon, that might impose a -1 or -2 penalty. A weapon that has an odd shape or a lot of protrusions might suffer a -2 or -3. After all, more than one gunslinger's accidentally snagged the hammer of his pistol on his clothing and ended up taking a dirt nap....

CHANGING CLIPS

If a character uses a weapon that has Charges bought with Clips (such as most firearms), a successful Fast Draw roll also allows him to change Clips as a Half Phase Action. A character may change two Clips in one Phase using this rule; he only has to make his roll once to change both Clips.

FAST DRAW AND INITIATIVE

If two characters simultaneously use Held Actions, a character who succeeds with a Fast Draw roll (instead of a DEX Roll) acts first. Fast Draw has no effect if both characters are not using a Held Action — it does *not* allow a character to act before his DEX (to do this, buy Lightning Reflexes, or use the Combat Maneuvers *Hipshot* or *Hurry*). However, at the GM's option any or all of the following optional rules may apply:

■ a character using Fast Draw instead of a DEX Roll in a contest to see who acts first, either for Held Actions or because two characters have the same DEX, receives a +2 bonus to his roll when using a weapon to which his Fast Draw applies. Alternately, the character with Fast Draw may always act first (at least in the case of competing Held Actions).

■ if two characters competing to see who uses a Held Action first tie their rolls, the character with Fast Draw automatically wins the contest, and gets to act first, when using a weapon to which his Fast Draw applies.

■ a character with Fast Draw who uses the *Hipshot* Combat Maneuver with a weapon to which his Fast Draw applies receives a *+2* bonus to DEX instead of the usual +1.

■ a character with Fast Draw who uses the *Hurry* Combat Maneuver with a weapon to which his Fast Draw applies suffers only a -1 penalty to CV, Skill Rolls, and Characteristic rolls.

EQUIPMENT

Fast Draw doesn't require equipment; it's a purely personal Skill. However, some types of weapons or weapons holders are specifically designed to facilitate rapid readying. This is bought as a small bonus, usually no more than +2, to a character's Fast Draw roll.

POWERS AND FAST DRAW

Characters with teleportation powers who can use them on objects (aportation) sometimes buy Fast Draw to simulate their ability to teleport a weapon into their hand in the blink of an eye. Sometimes a character's ability to alter the shape of his body may make it easier to draw a weapon.

CONSEQUENCES OF FAILURE

If a character fails a Fast Draw roll, usually it just means he has to take the standard Full Phase to draw his weapon or change his Clip. (He cannot, after failing the roll, choose to do something else instead; he declared his Action and has to stick with that even though the procedure didn't go quite as well as planned.) If the character fails badly (by 4 or more) he may have snagged the weapon or thrown himself off-balance, meaning it takes him two Full Phases to draw it, he suffers a -1 OCV (or DCV) penalty on his first attack with it, or the like.

BASE TIMES

Using Fast Draw itself takes no time. After all, its main function is to let characters do something that takes time in only half as much time as usual.

UNIFYING/SUBDIVIDING FAST DRAW

Fast Draw is already broken down by Weapon Familiarity categories, but other possibilities exist. First, in a game that de-emphasizes Skills or favors cinematic action, the GM might change it to a single Agility Skill that works with any weapon. In more "realistic" games, characters might buy it by WF *sub*categories, on the grounds that being able to Fast Draw, say, a pistol or sword doesn't make a character skilled at rapid-drawing a shotgun or axe. For 2 Character Points, a character buys a DEX-Based Roll with any one 1-point WF subcategory (with this version of Fast Draw, characters can't buy the Skill for an entire 2-point WF category). Each additional 1-point WF category costs +1 Character Point.

FAST DRAW BY GENRE

Fast Draw works the same in all genres, though the genre may limit the types of weapons it can apply to. For example, few Fantasy campaigns feature characters that can buy Fast Draw (Small Arms) because firearms don't exist.

Martial Arts

In Japan, Fast Draw is called *iaijutsu;* it's the samurai's ability to unsheathe his sword instantly and attack without hesitation. Tradition attributes the creation of Iaijutsu to one Hōjō Jinsuke, who developed it as part of a quest to avenge his father's murder.

Warriors often regard Iaijutsu as a martial art in itself, but it's sufficient for game purposes to describe it as a "companion art" to Kenjutsu. It has four basic techniques: *nukitsuke* (the sudden drawing of the blade); *kiritsuke* (the cut(s) used to injure or kill the opponent); *chiburi* (the shaking of blood from the sword-blade; this maneuver is sometimes used to blind an opponent by flicking blood into his eyes); and *noto* (resheathing the sword). Other techniques dealt with countering surprise attacks, attacks by multiple opponents, fighting in the dark, and so forth. (Thus, to truly simulate Iaijutsu, a character should purchase not only Fast Draw but Combat Sense and Defense Maneuver as well; Lighting Reflexes is also recommended.) Knowledgeable characters can identify different substyles of Iaijutsu by the grips they teach, the fighter's emphasis on certain techniques, and so forth.

Fast Draw has another function outside of combat: a character can use it to snatch things out of someone's hand before he can close it — a trick often performed to impress someone. The character has the other person hold something in his open palm, and tells the fellow he can snatch the object out of his hand before the fellow can close his hand. With a successful Fast Draw roll in a Skill Versus Skill Contest against the target's Fast Draw or DEX Roll, he can do this. If the character succeeds and immediately makes an appropriate Presence Attack, grant him +1d6 for every two points by which he beat the target's Fast Draw or DEX Roll.

A character can also use Sleight Of Hand, if he possesses it, to make a switch. With successful Fast Draw and Sleight Of Hand rolls (the target can make a PER Roll in a Skill Versus Skill Contest with the Sleight Of Hand), our hero can take the object off the other fellow's palm and drop another in its place... without the target realizing what's happened. The target feels the object in his hand and thinks he won the contest.

Western/Victorian

Fast Draw is more closely associated with the Western genre than any other, thanks to the iconic image of two gunfighters meeting on a dusty street in a two-bit town to see who can outdraw and outshoot the other. In *Western Hero* campaigns GMs might want to give special consideration to some of the optional rules above, since properly tailoring Fast Draw to suit the campaign helps to make gunfights more tense and exciting.

FORENSIC MEDICINE

Type: Intellect Skill (roll: 9 + (INT/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

A character with this Intellect Skill can make inferences from a corpse about the cause of death, how long the individual has been dead, if the corpse was moved after death, and so forth — in short, he's trained in *forensic pathology,* a branch of medicine. He knows about the different causes of death, how they affect a body and its internal systems, and what happens to a body after death. He also knows about the different types of equipment found in a coroner's office, what they do, how to use them, and so forth.

As described below, the knowledge of a character with Forensic Medicine touches on many different subjects, and many Science Skills or other Skills are Complementary to Forensic Medicine in specific circumstances. Broader Science Skills such as Medicine, Human Biology, Anatomy, Pharmacology, and Histology (the science of using microscopes to determine cellular changes in tissue) can act as Complementary Skills generally.

A character with Forensic Medicine can perform autopsies (though possessing this Skill does not make him a licensed physician). Characters with SS: Surgery can perform autopsies, but without more specialized knowledge their conclusions are sketchy and subject to doubt.

Characters generally use Forensic Medicine to do one or more of three things: identify a body; ascertain the time of death; and ascertain the cause of death.

Identifying A Body

Usually the identity of a murder victim will already be known to a character performing an autopsy — the investigators can establish it through a variety of methods. However, sometimes the victim's identity is a mystery the forensic pathologist can help to resolve.

DENTAL RECORDS (FORENSIC ODONTOLOGY)

Besides leaving identifiable impressions (see page 154), teeth may prove useful in and of themselves. Dental records are a good way to identify an otherwise unidentifiable body, if records exist for the decedent. Teeth are extremely difficult to destroy, and thus often remain intact when other identifying features (such as fingerprints) are obliterated. Examination of a person's teeth can also provide clues about his diet and related habits. Analysis of the interior pulp of teeth can reveal a victim's age, and also provide cells for DNA typing.

SS: Forensic Odontology acts as a Complementary Skill to Forensic Medicine for purposes of analyzing teeth.

FORENSIC ANTHROPOLOGY

Forensic anthropology (also known as physical anthropology) is the branch of criminalistics concerned with the shape and structure of the human skeleton. Depending upon what bones are available and the condition they're in, a scientist can determine a victim's height, age, gender, and race from his skeleton. Bones may also provide evidence of some of the decedent's activities in life, and of the cause of death (for example, a knife may leave cuts in the bone). Anomalies in the skeleton may prove an unidentified murder victim's identity, if x-rays of the victim exist for comparison. Depending upon the condition of the skeleton, a Forensic Medicine roll at -2 to -4 is necessary to accurately make these determinations. SS: Forensic Anthropology acts as a Complementary Skill.

Facial Reconstruction

Forensic anthropologists can also reconstruct a person's facial features from his skull, providing a picture of a nameless victim which the police can distribute in the hope someone can identify him. To do this, a character must know both Forensic Medicine and SS: Forensic Anthropology, and must also have PS: Sculptor. Depending upon the condition of the skull, the Forensic Medicine roll is at -1 to -4. For every point the character misses the roll by, PER or INT Rolls made by others to identify the victim are at -1.

Time Of Death

Forensic pathologists often need to determine when someone died. There are three traditional signs or indicators that provide evidence of what time a person died: rigor mortis (stiffness); algor mortis (body temperature); and livor mortis (postmortem coloration).

The first sign is *rigor mortis,* the "stiffness of death." It usually begins about two to four hours after death, starting in the eyelids and small muscles of the face, then spreading throughout the body to the larger muscles. (In some rare cases cadaveric spasm, a state similar to rigor mortis, occurs almost instantly after death, and normal rigor then sets in.) Rigor lasts for about twelve hours thereafter. The muscles then relax in the same order in which they stiffened; the body becomes fully relaxed approximately 30-36 hours after death. By judging what point a body is at in this process, a medical examiner can estimate the time of death. However, other conditions (such as starvation and freezing weather, which delay it, or physical activity right before death, which accelerates it) can affect rigor; if appropriate, the GM can impose a penalty of -1 to -3 to the Forensic Medicine roll to judge rigor mortis to represent these factors.

The second sign is *algor mortis,* or "temperature of death." Body temperature falls at the rate of about one to two degrees per hour. Environmental factors, such as the temperature, can alter this, though. The GM may assign a penalty of -1 to -3 to a Forensic Medicine roll to judge algor mortis to reflect adverse environmental conditions.

The third sign is *livor mortis,* the "color of death" (also known as postmortem lividity, or PML). After the heart stops beating, red blood cells settle into the regions of the body which are nearest to the ground at that time — for example, the back if someone dies while lying face-up on a bed. This colors the skin in that area, similar to a bruise. The further along this process is, the longer the person has been dead. The coloring starts to become visible about 30 minutes to an hour after death in fair-skinned persons (it may never be visible in heavily-pigmented skin). The settling ends and becomes permanent about four to eight hours after death. Livor mortis can also provide evidence of whether or not someone has moved a corpse, based on the distribution of the coloring in relation to the position the body is found in.

Taken together, these three indicators usually provide an estimation of the time of death — but it's only an estimation. Forensic pathologists cannot necessarily determine the time of death with the precision depicted in TV police dramas. Some circumstances can hasten or slow these processes. Besides the environmental factors mentioned above, the use of drugs, exercising shortly before dying, the victim's body type, and struggling with the murderer can all sometimes affect the rate at which these three processes progress. The GM can assign Forensic Medicine modifiers of from -1 to -5 to simulate these factors.

Other Indicators

Other indicators may help a forensic pathologist estimate the time of death. For example, if the victim is known to have eaten shortly before dying, the amount of food digested can show the time of death, since digestion is a steady, measurable process.

The presence of insects in and around the corpse provides a lot of information (see below).

The corneas of the eye tend to become cloudy six to eight hours after death.

The level of potassium in eye fluid, which increases slowly and measurably after death, and is not affected by temperature, can be measured to provide time of death information. Furthermore, eye fluid also does not decompose, making it useful for detecting the presence of drugs or poison in the body.

Players and GMs can probably think of other creative ways to ascertain the time of death based on the circumstances in a scenario.

Decomposition

Generally, a body begins to decompose about three to five days after death. A corpse completely rots, leaving nothing but a skeleton, in approximately five to nine weeks if exposed to the elements. The time required depends on many environmental factors, such as temperature and insect life. For example, in the tropics or other warm regions a body can skeletonize in just a few weeks, or even as little as about ten days... but in arctic regions, a body may never decompose. Corpses take about twice as long to decompose underwater, and eight times as long when buried, as they do when they are exposed to the elements.

INSECTS (FORENSIC ENTOMOLOGY)

Forensic entomology is the science of determining the time of a murder victim's death based on the presence and activities of insects around a corpse. By knowing enough about the life cycles and behavior patterns of certain insects, pathologists can make more accurate determinations about the time of death. Characters who just know Forensic Medicine make rolls to determine facts from insect activity at -2 or more. Characters who also know SS: Forensic Entomology or SS: Entomology may make their rolls normally, and use those SSs as Complementary Skills to Forensic Medicine as well. The GM may impose additional penalties based on the state of the corpse, the obscurity of the information, and so forth.

Different species of insects are attracted to a corpse at different stages of decomposition. Scientists can use the rate of development of their young to determine the time of death. The most common insect found on corpses, the fly (such as blowflies and fleshflies), provides the best example. Flies arrive as soon as ten minutes after death and begin laying thousands of eggs (or depositing larvae) in the corpse's mouth, nose, eyes, other body orifices, and wounds. Eggs are typically laid during the day, not at night. The eggs take twelve hours to two days to hatch after being laid. The maggots then begin feeding on the corpse. They develop into a pupal stage six to ten days later, and the adults emerge from the pupa in twelve to 24 days. Beetles tend to arrive and begin eating dried skin about 24-36 hours after death. Spiders, millipedes, and similar life forms arrive approximately 48 hours after death to feed on the insects around the corpse. Cheese skippers and other insects which can live on extremely decayed bodies will usually be found three to six months after death (depending, of course, on when decomposition begins).

All of these figures vary depending upon the environmental conditions and the particular species of fly or insect. Insect activity may also be influenced by such factors as whether the corpse is outside or indoors, in the sunshine or the shade, or wet or dry. The season of the year also plays a part; there is much more insect activity in the spring and summer than the winter, for example. The GM may impose modifiers of -1 to -5 to the Forensic Medicine roll based on these factors.

Insect life can also provide clues as to whether a corpse has been moved. If the insect life in and on the corpse differs from that where the corpse is found, someone probably moved the body from the scene of the killing.

Insects can tell the examiner about the drugs used by (or poisons used on) a victim. after insects feed on a body, their tissue and fecal material shows traces of the drugs or poisons in the victim's system at the time of his death.

Lastly, the presence of insects may help track the movement of vehicles, people, and goods, such as cocaine shipments. The insects found in or with such objects may provide a biological "map" of the object's journey across the world.

Not all insect activity helps the forensic pathologist. Fly eggs laid on corpses may distort or destroy the appearance of a wound, making it harder to determine the weapon used to kill the victim. An inexperienced examiner could mistake postmortem insect bites for antemortem abrasions (a possible -1 to -2 penalty to the Forensic Medicine roll). Insects can confuse blood splatter evidence by walking through the splatters or by consuming the blood and later depositing some of it in their feces or for their young to feed on.

Causes Of Death

There are thousands of causes of death, but *Dark Champions* GMs and player are primarily concerned with those which involve murder. A clever GM can provide characters clues to the cause of death, then feed them a little more information when they make their Forensic Medicine rolls. Eventually, the players should be able to deduce what happened, perhaps earning an Experience Point or two if they've been especially quick-witted. The GM could just tell them the cause of death straight out if they make a Forensic Medicine roll — but if possible, he should give the players a chance to figure it out on their own, because that's more fun for everyone.

This section is by no means complete — that would require a medical textbook (such as some of the ones listed in the Bibliography). It primarily covers facts which would be useful in planning *Dark Champions* scenarios. If the GM feels the need to know more, he should do some pre-scenario research.

ASPHYXIATION

Asphyxiation is death due to the body's failure to receive oxygen. It can occur because of suffocation/smothering, the breathing of certain gases that block the utilization of oxygen by the body (chemical asphyxiation), or strangulation. It doesn't take much effort to strangle a human being: 11 pounds of pressure is enough to cut off the carotid arteries, causing unconsciousness in approximately ten seconds (1 Turn, in *HERO System* terms), and 66 pounds of pressure cuts off the vertebral arteries.

Hanging

Hanging is a form strangulation frequently used to commit suicide. It's rarely seen as a form of murder, and despite still being "on the books" as a law in some states, is no longer used as a form of legal execution. Judicial hangings, which break the neck and cause instant unconsciousness and a rapid death after a period of convulsions (assuming they're performed properly), are not really a form of strangulation.

Hanging involves placing a ligature of some sort (such as a rope or electrical cord) in a noose around the neck so that the body's weight supplies the pressure needed to cut off blood flow to the brain. Because this requires so little pressure, it's possible for someone to hang himself while sitting, kneeling, or lying down (for example, from a

doorknob or bedpost). The noose leaves a slanted ligature mark around the neck, and the shape and size of the mark usually indicate what type of material was used. If the ligature material is soft (such as a towel) or a pad is placed between the noose and the neck, the ligature mark may be less distinct or nonexistent. Generally, the face of a hanging victim is pale, and the tongue protruding and black (from drying). There may be scratch marks around the neck where the victim tried to undo the noose. Blood pools in the victim's lower extremities, such as arms, hands, and legs.

Hanging is rarely used as a form of homicide because it's difficult to hang someone who's resisting. Homicidal hanging victims usually display signs of having been beaten, subdued, or drugged.

It's possible to hang a corpse and create the same ligature marks that would have resulted if the victim were still alive, provided the hanging takes place within two hours of death.

Ligature And Manual Strangulation

Ligature strangulation is a form of strangulation involving the tightening of some sort of band by a force other than body weight. The classic example is a garrote. Ligature strangulations are almost always murders, and the victims are usually female. Unconsciousness generally occurs within ten to fifteen seconds.

A victim of a ligature strangulation looks somewhat different from a hanging victim. First, his face is usually congested, not pale. Second, the appearance of the ligature differs — not only is it be a horizontal mark, but the mark's appearance varies depending upon the type of instrument used (the thinner it is, the more prominent the mark), the amount of force used by the strangler, and how much the victim resists. Ligature strangulation marks are usually well-preserved, even during decomposition. There may also be scratch marks on the victim's neck where he tried to undo the band. Victims often have hair clutched in their hands as well, but this is almost always their own, not their killer's.

Manual strangulation is strangulation by the hands or arms of another. It's always a form of murder, not suicide or an accident. Manual strangulation often leaves abrasions, contusions, or scratches on the neck (which may indicate how the attacker placed his hands); fracturing of the windpipe (trachea) or hyoid bone (which anchors the tongue muscles) is also common. Manual strangulation also causes internal bleeding into the neck muscles, and pinpoint hemorrhages (petechiae) in the eyeballs when the capillaries in the eyes burst.

Other Forms Of Asphyxiation

Smothering and suffocation are also forms of asphyxiation. They generally cause no bruising, and the pinpoint eye hemorrhages may not occur. A form of smothering known as *burking* may leave no traces — the killer covers the victim's mouth and nose with the hands while sitting on the victim's chest. It would be difficult for the PCs to catch a murderer who burked his victims and left no fingerprints.

Crucifixion is also a form of asphyxiation. It causes death due to shock, dehydration, and asphyxia when the body's weight cuts off the ability to breathe. Although this form of murder is extremely rare in real life, *Dark Champions* characters may encounter it when they're dealing with evil religious cults or particularly vicious organized crime groups.

BLUNT TRAUMA

Blunt trauma means injuries caused by impact — beatings, collisions, and similar incidents. The nature of the injury usually depends on the amount of force used, the area(s) of the body struck, the amount of body surface covered, and the type of weapon used (if any). Beating victims sometimes display blunt trauma "defense wounds" on the arms and hands, indicating they were trying to fend off the blows.

There are four types of blunt trauma: abrasions, contusions, lacerations, and skeletal fractures.

Abrasions

An abrasion is a skin injury where the skin is scraped away by friction. It's caused by scraping (such as being dragged by a car) or by some kinds of impact or pressure. The shape or outline of the striking object may be reflected in the abrasion (for example, a person who's thrown off of a building and lands on a sewer grating may have the pattern of the grating impressed onto his body). Abrasions may also indicate the existence of an internal injury. In the case of non-fatal incidents, an examiner can estimate the age of an abrasion based on how much it's healed.

Contusions

A contusion, better known as a bruise, results from the rupturing of blood vessels under the skin in response to blunt trauma. Not all blunt trauma causes contusions; it's possible to hit a person without bruising him (for example, the abdomen rarely bruises). Contusions most often form in fatty areas or areas of thin skin; the victim's age, gender, or health may also influence whether a bruise results.

A bruise may reflect the pattern or shape of the object used to strike the victim, but can be differently shaped as well. Bruises often change color, but examiners cannot accurately date them by this or any other manner. In some instances they can roughly estimate the age of a bruise based on the healing process at the cellular level. Bruises typically intensify and spread after death.

Corpses can be bruised, if the beating is severe and takes place within a few hours after death. Examiners cannot distinguish such contusions from those made while the victim was alive. Bruises blend indistinguishably with *livor mortis*.

Lacerations

Lacerations are tears in the tissue caused by the crushing force of a blow. A long, narrow object usually creates a linear laceration, while a flat object usually creates an irregular or Y-shaped one. They most often occur in bony areas of the body, where the skin splits relatively easily.

Lacerations frequently resemble incisions (a type of sharp trauma, see page 186). However, they display a phenomenon known as "bridging," where tiny fibers of tissue "bridge" the wound at its bottom. Incisions do not have bridging.

Based on the way the force of the blow has moved or abraded the skin at the edges of a laceration, a forensic pathologist may be able to determine the direction and angle of the blow (this requires a Forensic Medicine roll, typically with a penalty of -1 to -3). Examiners cannot determine the age of lacerations (except possibly by the course of healing, in the case of non-fatal incidents).

Skeletal Fractures

Skeletal fractures are injuries to the victim's bones. The type and direction of impact, the amount of force, and the place hit all influence whether a fracture occurs and its appearance. The nature of an injury to bone may also provide the examiner with other information (for example, whether the damage to the bone took place while the person was alive, or is post-mortem damage to old, dry bones). Some instruments leave distinctive shapes in bone; however, some be misleading — for example, a bullet may shatter bone in such a way that the injury looks like a fracture caused by blunt trauma (a Forensic Medicine roll at -1 to -3 lets a character discern the proper source of damage to a bone; see also *Forensic Anthropology,* page 182).

BURNS

Burns are generally caused by three phenomena: fire (the most common cause), chemicals, and electricity (discussed below).

Burns from fire or heat may be caused by direct contact with flame, contact with a hot object, heat radiating from a hot object, or scalding. They are ranked by degrees: first (superficial, no blisters); second (burns of part of the thickness of the skin, usually with a red, moist, and blistered outer appearance); third (burns of the full thickness of the skin, with a leathery white outer appearance and no blisters), and fourth (incinerating burns extending beneath the skin). For the most part, examiners cannot distinguish between pre-death and post-mortem burns. Blistering can occur after death.

It's extremely difficult to burn an entire body — even if the outside is charred, the inner organs are usually undamaged. Severely burned bodies may have split skin (exposing the muscle beneath). Bones exposed to extreme heat display distinctive fractures which show by their pattern whether the skin had flesh on it when it was burned, and sometimes even what type of bone was burned (different bones fracture in different ways based on their thickness and shape). Furthermore, unless bones are pulverized after being burned (as they are in a crematorium), it's often still possible to determine certain facts about the skeleton (such as its age and gender) from them, despite the damage caused by the flames. Teeth are highly resistant to heat, and are often used to identify burned bodies (accurate identification can be made with as little as one tooth).

Victims who die in fires often die not of burns, but of carbon monoxide inhalation. If the victim has no carbon monoxide in his blood (or carbon particles in his larynx and lungs), then he was probably killed before the fire (which may have been set in a futile attempt to destroy the body). Carbon monoxide poisoning turns the skin bright red.

Burns caused by chemicals vary depending upon the type and strength of chemical (such as acid), the amount used, and the duration of contact between the chemicals and the skin. They tend to be second or third degree burns, and the color of the scab that forms over the burn indicates what kind of acid was used: yellow for nitric acid; black or brown for sulfuric acid; white or grey for hydrochloric acid; and light grey or light brown for phenol.

DROWNING

Drowning is death caused by a submersion in liquid, which of course prevents breathing. It can occur in as little as six inches of water, and can occur if only a small amount of fluid enters the lungs. If the victim is alive when placed in the liquid, he inhales it and the examiner will find it in his lungs (and possibly stomach). If a corpse is placed in the water in an attempt to disguise the cause of death, there may be little or no fluid in the lungs. Drowned bodies float face down, and may suffer post-mortem scrape and scratch injuries from brushing against things as they float. Within three to four hours after immersion, the liquid also tends to wash blood out of other injuries, making them appear to be after-death injuries when in fact they occurred before death.

Corpses sink relatively soon after drowning. They remain submerged until decomposition-created gases make them float to the surface (a "floater," in police parlance). The colder the water, the longer the decomposition process takes. During the body's time in the water, it may be damaged by marine animals or other natural phenomena.

There are no special forensic tests that prove a victim was murdered by drowning, as opposed to dying in an accidental drowning. The determination results from the circumstances of the killing (*i.e.,* the fact that the body was found in or near water) and the exclusion of other potential causes of death (such as drugs or stabbing).

ELECTROCUTION

Electrocution deaths are usually accidental. Humans are most sensitive to AC current (the most common type). Thirty-nine to 150 cycles per second is the range of greatest lethality. Important factors include amperage (how much electricity enters the body against the resistance of human skin) and the voltage (electromagnetic force). Low voltage (*i.e.,* household current) only kills or injures if it comes into direct contact with the body; it causes death in seconds or tenths of a second due to ventricular fibrillation. High voltage (such as that from high tension electric lines) can kill if it comes within centimeters of someone because an arc of electricity leaps from the source to the victim. It causes almost instantaneous death by burning and cardiac and respiratory arrest.

High voltage electricity always cause burns, and low voltage causes them about half the time. The burns are at the point where the current enters and exits the body; the hand is the most common entry point and the foot is a frequent exit point. Electrical burns are distinctive from other types of burns. High voltage may also cause massive internal damage, destroying tissue and organs.

Homicide by electrocution is rare, but does occur. The most common method is to drop a plugged-in appliance into someone's bath. This does not cause burns, and if the killer removes the appliance from the water, the death appears natural.

FALLING DEATHS

When someone dies after a fall, the question is whether it was suicide, an accident, or murder. The injuries resulting from a fall are the same regardless of the cause. However, if the fall is an accident, the body is usually near the wall; if the person jumped, was pushed or was thrown, the corpse is further away from the wall. Lastly, a victim bleeds more if he's alive on impact.

POISON

There are many different varieties of poison, with many different effects. Poisons are often difficult to detect and can be overlooked in an autopsy unless specifically tested for. The effects of some of the most common are listed below. In addition to the more overt effects (including death), the amount of poison in a person's body can offer significant information to an investigator — how long the poison has been in the body, or the length of time the poison has been administered, for example. A character must have SS: Pharmacokinetics to obtain and analyze such data properly, however.

Arsenic: A colorless, odorless powder which acts slowly. Four to seven hours after being fed arsenic, the victim develops diarrhea and stomach pains — symptoms often mistaken for illness. Eventually, arsenic kills by dehydrating the body, causing fatal shock.

Curare: An injected poison. It kills by paralyzing the muscles needed to breath. The paralyzing effects disappear quickly, leaving no traces visible to the naked eye. Doctors use two similar drugs, Pavulon and succinylcholine, as anaesthetics.

Cyanide: This poison has become infamous in recent years because deranged individuals have killed people by putting it in Tylenol, Kool-Aid, and other products. Because it works very quickly, it's also used in "suicide capsules" carried by spies. It even works as a gas (the Bhopal disaster involved a form of cyanide gas). Cyanide has two "distinctive features" which make it easy to find if looked for. First, to some people it smells like almonds: forty percent of the population has genes that allow them to smell cyanide. Second, cyanide turns the blood and skin a dark scarlet color and corrodes parts of the stomach, effects which are easily detected.

Insulin: Insulin, a drug given to diabetics, can kill in large doses. Special tests are required to find the traces.

Ricin: A poison derived from the castor oil plant which kills by interfering with the blood's ability to carry oxygen to the heart and brain. Its effects include abdominal pains, nausea, cramps, convulsions, and dehydration (similar to many illnesses). Even tiny amounts of it can cause a slow, painful death.

Strychnine: A fast-acting poison which kills by disrupting nerve impulses, causing intensely painful convulsions which prevent breathing. The victim is left with a *risus sardonicus,* or sardonic rictus grin. However, the muscles soon relax, leaving no trace of the cause of death unless special tests are run.

SHARP TRAUMA

Sharp trauma is injuries caused by sharp or pointed objects, such as knives or icepicks. Victims of stabbings (and other sharp trauma) may have "defense wounds" on their hands and arms if they were able to fight back or defend themselves. There are three basic categories of sharp trauma: stab wounds, incised wounds, and chop wounds.

Stab Wounds

Stab wounds are sharp trauma where the depth of the wound is greater than the length of the wound. The edges of the wound are usually distinct, without abrasions or contusions, although this may vary depending upon how sharp the stabbing object is (but not upon whether the blade's edge was serrated or jagged — usually this is not apparent from the wound).

The shape and size of a stab wound depend upon six factors: the shape of the weapon; the direction of thrust and withdrawal; movement of the blade; movement of the victim; the relaxation or tension of the skin; and Langer's lines (fibrous threads of tissue in the skin that can distort the shape of the wound if the cut goes against their "grain"). The shape of the cut may indicate what type of blade was used and how the knife was twisted during the attack, but this is not always reliable. For example, multiple icepick wounds may resemble wounds from small shotgun pellets (-1 to -2 to the Forensic Medicine roll to distinguish). Odd-shaped weapons, such as screwdrivers or scissors, often create wounds with identifiable shapes.

If there are several deep stab wounds, a forensic pathologist can usually determine the length of the blade used. The fewer wounds there are, the less likely it is that an accurate determination can be made. (In game terms, a character has to make a Forensic Medicine roll to determine the length of the blade; he suffers a -3 penalty if there's only one wound, a -2 penalty for two to four wounds, and a -1 for five or more wounds). An examiner can also vaguely determine the amount of force used to stab someone if he character makes a Forensic Medicine roll.

The amount of bleeding caused by stab wounds depends primarily on where the victim is stabbed and what's pierced. For example, an attack that punctures an artery causes a large amount of bleeding and a fairly quick death. It's possible for postmortem wounds to leak substantial quantities of blood, depending upon how the body lies and where it's stabbed.

Incised And Chop Wounds

Incised wounds are cuts and slices from sharp objects. The majority of them are not fatal. The length and depth of the wound will not normally tell the pathologist anything about the blade used to inflict it, but a dull or nicked knife may not cut as cleanly. Examiners can distinguish incisions from lacerations (see above) by the absence of "bridging" in the depths of the wound.

Chop wounds are caused by heavy cutting tools, such as machetes and axes. They usually consist of an incision-like wound and a broken or grooved bone beneath. If the weapon is dull, the wound may also have laceration-like characteristics. If the weapon cuts bone, the cut may reveal information about the weapon, such as whether it was a thick blade or a thin one (thin blades "chatter," or move from side to side, when cutting through bone; thick ones do not). The weapon may also leave chips of metal in the bone which can be compared to the metal of the weapon if it is recovered (and perhaps even fitted to the blade where they broke off), though this occurs far more frequently in fiction than in real life.

Injection Sites

Punctures from hypodermic needles, whether from intravenous drug use or poisoning by injection, tend to heal and fade away within about 48 hours, so they can provide clues only for a short time. However, injections with unsterile needles, such as those used by many drug addicts, produce permanent scar-like marks ("tracks") that do not fade.

TORTURE

Unfortunately, some murderers, such as some serial killers, derive pleasure from torturing their victims before killing them. Wounds from torture may look just like wounds which were received during a struggle. However, if the victim is still alive for a while after the wounds are inflicted, certain blood traces and biochemicals, such as leucocytes or serotonin, will be found in the edges of the wound and/or in increased levels in the body. Between this and the location and type of wound, a forensic pathologist can determine that the victim was tortured, rather than mutilated after death. Ligature marks (marks left in the skin by rope when someone has been tied up) may also offer clues as to the victim's demise. This sort of information, while not pleasant, can be used to give PCs a warning about what sort of person they're dealing with.

Other Rules

EQUIPMENT

While a character trained in Forensic Medicine may be able to make simple conclusions about time, cause, or manner of death with visual observation, usually Forensic Medicine requires equipment: a coroner's operating room and the necessary medical tools.

POWERS AND FORENSIC MEDICINE

See page 156 for information on the interaction of Powers with Criminology; some of that information likewise applies to Forensic Medicine when Powers are used to kill humans. Even if a Power doesn't necessarily leave traces on a body, the very absence of a defineable cause of death may provide some clues about who committed the murder.

CONSEQUENCES OF FAILURE

If a character fails a Forensic Medicine roll by 1-3, it usually means he didn't find any useful information. If he fails it by 4 or more, it means he gathers incorrect information (usually because he overlooked something when performing the autopsy) or accidentally destroyed valuable evidence.

BASE TIMES

Conducting a basic visual examination of a corpse to determine simple facts evident on the outside of the body takes very little time — no more than 1 Turn, and possibly as little as a Full Phase. Conducting a simple autopsy requires 1 Hour; more thorough or complex autopsies take 2-6 Hours, and sometimes longer.

SUBDIVIDING FORENSIC MEDICINE

In a campaign where characters do a lot of criminalistics work, the GM might want to divide Forensic Medicine into a dozen or more Intellect Skills based on the subfields described above. Thus, instead of Forensic Medicine characters would buy Forensic Odontology, Forensic Anthropology, Burn Analysis, Sharp Trauma Analysis, and so forth. That way each of the investigator PCs could distinguish himself by being particularly skilled at some types of forensics work, but not so knowledgeable about other fields.

Alternately, in a game with a lot of sentient bipedal species (such as some Science Fiction campaigns) the GM might require characters to buy Forensic Medicine by species. The first species costs 2 Character Points; each additional species costs +1 Character Point.

FORENSIC MEDICINE BY GENRE

Dark Champions

Forensic Medicine tends to be more useful in *Dark Champions,* with its frequent emphasis on modern-day crimefighting, than in any other genre. It's for this sort of game that the GM's most likely to consider subdividing the Skill.

Fantasy

In Fantasy campaigns, Forensic Medicine often becomes *Embalming;* priests, necromancers, and others who need to preserve dead bodies know it. In such situations, the ability to determine the cause of death is limited, at best; the character can identify obvious causes (like sword wounds), but probably not more subtle causes (like a heart attack or some diseases or poisons). In some Fantasy settings, anyone who knows too much about how people die and what happens after death may be suspected of being an assassin or a necromancer.

Embalming allows a character to preserve a body against the ravages of time. For game purposes, assume a body decays completely in 1 Month. If a character makes his Embalming roll exactly, increase that to up to 3 Months. For every point by which a character makes his Embalming roll, a corpse remains more or less undecayed for one step down the Time Chart. (Of course, you can apply this same rule with standard Forensic Medicine in other campaigns if you like.)

Superheroes

As noted under *Criminology,* most *Champions* campaigns feature at least one PC (or major NPC) who's an expert detective. Giving such a character Forensic Medicine is no stretch at all, even though learn it's not necessarily as easy a discipline to learn or use as Criminology.

While super-technology may make using Forensic Medicine easier (imagine, for example, a mystical or rubber science scanner that can instantly ascertain the time of death with pinpoint accuracy), superpowers could also complicate a coroner's job tremendously. For example, what traces, if any, are left by a Drain BODY used to kill a victim?

FORGERY

Type: Intellect Skill (roll: 9 + (INT/5) or less)
Cost: 2 Character Points for a base roll with one category (or 1 Character Point for a base roll with a specific subcategory); each additional category costs 2 Character Points (and each additional subcategory 1 Character Point); +1 to the roll with all categories and subcategories known per +2 Character Points

This Intellect Skill represents the ability to duplicate documents, objects, and money. Characters buy Forgery by categories. Each category costs 2 points; individual subcategories (such as Paintings) cost 1 point each. The base roll with all categories and subcategories the character knows is (9+(INT/5)) or less; +1 to the roll for all categories costs +2 Character Points.

Forgery gives a character the ability to do the following:

■ create fake or fraudulent versions of the types of objects he knows how to forge

■ detect that an object is a forgery based on analysis of its materials, quality, style, and the like

■ sell or "pass" fakes he has created

Additionally, Forgery gives a character knowledge of the techniques used to create fakes (including things like how to obtain the right materials and tools, ways to artificially age or distress a forged item to lend it authenticity, and so forth), famous forgers and forgeries, and the like. This includes a broad knowledge of art history, the history of printing, the history of money and coinage, or other such subjects related to what the character can create.

Forgery does not require a character to buy any "prerequisite" Skills such as PS: Painting, KS: Art History, or PS: Printer; it's assumed the Skill gives him those abilities. However, many characters who specialize in Forgery do buy such Skills, both to represent depth of knowledge and as Complementary Skills. In "realistic" games the GM may actually require characters to buy them. After all, the fact that a forger devotes his skills to creating fakes doesn't mean he isn't legitimately talented and can't do legitimate work with them.

In most cases, forging any type of item requires time and specialized equipment, especially for highly technical forgeries. Simply duplicating a signature by hand only takes a few seconds, though.

Forgery Categories

FORGING ART

"He who knows a thousand works of art knows a thousand frauds." —*Horace*

Of all the things a forger can fake, the most romantic and alluring by far is fine art. Whether it's a painting, a sculpture, a piece of jewelry, an illuminated manuscript, or something else, a sufficiently skilled forger can re-create it in precise detail. Art forgery has been a thriving business since mankind first began creating art, and the number of fakes is legion. Thomas Hoving, former director of the Metropolitan Museum of Art, estimates that of the approximately 50,000 works of art he's viewed in his lifetime, fully 40% — two in every five — were fakes. For some periods and types of art scholars' estimates of the number of fakes rise to 50% or greater. Most are "pious frauds" (works faked up to support some religion or religious doctrine) or part of some scheme to make money. Even some artists famed for their original creations also created forgeries for various reasons.

To create and profit from a fake piece of artwork, a forger needs to do five things.

Obtain An Original To Work From

First, he needs an original to work from (though as indicated in the Forgery Modifiers table, an "original" doesn't literally have to be the original — it could be a print, a copy, or the like). If he's making a copy of the original, having an original to work from is absolutely essential. If he's trying to create a "new" (or "previously undiscovered") work of art in imitation of a famous artist's style and technique, it still helps to have one or more originals to consult to approximate the real artist's style as closely as possible. Obtaining an original to work from may be an adventure in itself!

If appropriate, the GM can have a character make a Forgery roll to obtain an original to use as "inspiration." Usually this roll is unmodified since finding decent copies of most well-known artists' work isn't difficult (in fact, the GM might even waive the roll if the character's copying a well-known artwork). In the case of obscure artists or rare items, the roll might suffer a -1 to -3 penalty. As a rough guideline, if the roll succeeds exactly, the character has an Average quality original; if it succeeds by 2, he has a Good original; if it succeeds by 4 or more he has a Very Good original (if that's even possible). If the roll fails by 1-3, he has a Poor original; if it fails by 4 or more he has a Very Poor original.

If the character only has a single photograph of the artwork to work from, he may suffer from a particular difficulty no matter how good the photo is: a picture only shows one side of an object. That's no problem with a painting, but with a three-dimensional object it means the artist has to guess at what the unseen sides look like. (To some extent, photographs also make it difficult to forge complex documents and money, since they deprive the forger of the ability to evaluate texture.)

Obtain Proper Materials And Tools

Second, he needs the proper materials. This means not only raw materials (such as raw stone to turn into a sculpture) but the proper tools. Ideally a forger wants his materials and his tools to be as close to those the original was made with as possible — they should be the same age, of the same substance and quality, and so forth. However, it's not always possible to obtain the best possible materials and tools, so the forger has to improvise. Since there are few unused canvases from centuries past lying around waiting for him to use, perhaps he finds a relatively valueless painting from the same period as his fake, removes the paint from the canvas, and then uses the canvas for his forgery. Since he can't artificially age ink or paint, perhaps he cuts pages from a contemporary manuscript and grinds them into the ink or paint so that it carbon-dates to the right time. And at all costs the forger must avoid using materials that didn't exist (or couldn't have existed) at the time his fake was supposedly made! Many a forger's been tripped up when chemical analysis showed that his paint or ink included materials not available in earlier centuries.

Obtaining the proper materials requires a Forgery roll. If the work of art to be copied is modern, no roll may even be required. Copying older works makes it progressively harder to find just the right materials — for every 300 years (or fraction thereof) that the fake predates the modern day, impose a -1 penalty. If the roll succeeds, it functions as the result for a Forgery Versus Forgery Skill Contest with someone who tries to determine if the work is a fake by analyzing its materials or the tools used to create it. If the roll fails, anyone who analyzes the work's materials scientifically automatically realizes it was made with improper materials (however, the forger may still try to sell the item, hoping that no one tests it). If the roll fails badly (by 4 or more) the forger *thinks* he's done a wonderful job, when in reality the fact that his work is a forgery is obvious under analysis.

Create The Fake

The most difficult and time-consuming step in the process is usually creating the fake. Doing it properly usually takes days or weeks; see the Forgery Base Times table below for suggested Base Time guidelines. Of course, this requires a Forgery roll using the Simplicity and Sample Quality modifiers. If the roll succeeds, it functions as the result for a Forgery Versus Forgery Skill Contest roll made by someone who tries to determine if the work is a fake by analyzing the quality and style of the work. If the roll fails, anyone with Forgery, a relevant KS, or some other appropriate Skill automatically realizes it's a fraud; if the roll fails by 4 or more, even uneducated persons (those with no relevant Skills) know it's a forgery. (Alternately, the GM might grant such persons a +4 or greater bonus to their roll to use Forgery as an Untrained Skill to detect the fake.)

FORGERY TABLE

Art Objects

Paintings
Sculpture
Metalwork
Jewelry
Vehicle License Plates

Documents

Papers (official documents, signatures, seals, magnetic codes, and so forth)
Identity Cards (passports, drivers' licenses, Social Security cards, badges)
Checks And Commercial Paper

Money (Counterfeiting)

Coins
Paper Money

Commercial Goods

Clothing
Credit Cards
Machine/Vehicle Parts
Medicines
GMs should create new or different categories to suit their campaigns, if necessary.



FORGERY MODIFIERS

Simplicity	Modifier	Example
Very Complex	-4	Masterpiece work of art
Complex	-2	Colorful, detailed paper money; high-quality artwork; modern driver's licenses, credit cards, and the like
Average	+0	Typical paper money, average artwork, older driver's licenses
Simple	+1	Typical legal document or paperwork
Very Simple	+2	Simple legal document or paperwork
Sample Quality	**Modifier**	**Example**
Very Good	+2	Mint-condition original document; original painting
Good	+1	High-quality original document; high-quality print of painting
Average	+0	Average-quality original document; print of painting
Poor	-2	Photocopy of a document; damaged object
Very Poor	-4	Blurry photocopy of a document

Age The Fake

Either as part of the creation process or a separate step, the forger has to artificially age his creation so that it appears, both to the eye and to scientific tests, to be of the appropriate age. This requires a third Forgery roll. If the forger obtained appropriately aged materials or tools (see above), he receives a +1 on this roll. Some of the techniques used include: applying a thin coating of glue beneath a painting and then heating it to create cracks, into which dirt is then lightly rubbed; burying an ivory artwork in the ground wrapped in a rabbit skin; damaging the work slightly and then making a fake repair that looks old; applying a fake chemical patina to simulate verdigris, rust, corrosion, or the like; blackening a work or altering its color with smoke or special varnishes.

Aging the fake often also includes creating an entire false history for it — after all, an item with a historical trail dating back centuries has to be at least that old, doesn't it? This may involve multiple acts of forging documents and the like, which of course requires separate Forgery rolls with Forgery (Documents). In many cases the forger also needs to have a plausible fake provenance (origin or source of the work) for his creation.

Sell The Fake

Last but not least, the forger has to sell or dispose of the fake, or else all his work has been for naught. See below for general rules for this, since it's a dilemma many forgers, not just those who create fake art, have to contend with.

FORGING DOCUMENTS

Forging documents — drivers' licenses, passports, deeds, wills, the Royal Seal, and so on — is similar both to forging art (see above) and forging money (see below), depending on the type of document to be forged, the time period, and other factors. If necessary, the GM can use rules from those sections for document forging as appropriate. For example, an attempt to forge older documents in the modern day (perhaps to "validate" forged artwork or to justify some bogus legal claim) should be treated as much like forging art as forging a document.

Documents have been forged ever since they became common and important. In the modern day identity papers and similar documentation are perhaps most likely to be forged; in the past legal licenses and documents were frequent subjects of the forger's art. In Elizabethan England, for exam-

ple, the forging of legal licenses was so common that there was a slang term for a person who specialized in such work: jarkman.

Creating a fake document is a two-step process. First, the character needs an original to work from (see above regarding art for some general information about this). In the modern day this usually isn't too much of a problem, but getting a copy of the precise document involved may cause some difficulties. For example, if a character isn't already a citizen of Brazil, obtaining a Brazilian passport he can duplicate with Forgery may not be easy. This requires a Forgery roll, usually unmodified; Streetwise may function as a Complementary Skill. As a rough guideline, if the roll succeeds exactly, the character has an Average quality original; if it succeeds by 2, he has a Good original; if it succeeds by 4 or more he has a Very Good original (if that's even possible). If the roll fails by 1-3, he has a Poor original; if it fails by 4 or more he has a Very Poor original.

Second, the character has to make the phony document. This requires appropriate printing equipment, ink, and so forth; obtaining these supplies may or may not require a separate Forgery roll. Creating the fake involves a Forgery roll. If the roll succeeds, it functions as the result for a Forgery Versus Forgery Skill Contest with someone who tries to determine if the document is a fake. If the roll fails, anyone who looks at the document closely (*i.e.,* succeeds with an INT Roll when examining it) or conducts the proper analysis of it realizes it's a fake. If the roll fails badly (by 4 or more) the forger *thinks* he's done a wonderful job, when in reality the fact that his work is a forgery is obvious under analysis. (Alternately, the GM might grant such persons a +4 or greater bonus to their roll to use Forgery as an Untrained Skill to detect the fake.)

The Base Time for forging a document depends on its complexity and other factors. Grinding out a fake ID for a teenager who wants to drink underage may only take 1 Hour; forging a passport or similar document takes 6 Hours.

Forging Checks And Commercial Paper

Check fraud and forgery — ranging from forging a signature, to altering the amount on a check, to making phony checks from scratch — remains a serious problem despite the increasing use of electronic money transfers. According to the Office of the Comptroller of the Currency, more than 13 fraudulent checks are written every second! Only in the past two decades have check security measures (high-resolution printing, watermarks, holograms, anti-copying features, special paper, and so on) become more common, and many forgers have found ways around these obstacles. Characters with Forgery (Documents) know how to create phony checks, and phony forms of other types of commercial paper (such as stock and bond certificates).

Forging Handwriting

Included under the rubric of Forgery (Documents) is the forging of handwriting. This mostly means creating believable-looking copies of someone's signature on a document, but when it comes to forging older documents may mean the entire text of the document. Characters can specialize in this type of Forgery by buying bonuses to the Skill Roll that are *Only For Faking Handwriting* (-1).

Forging a signature requires a Forgery roll. If the roll succeeds, it functions as the result for a Forgery Versus Forgery Skill Contest with someone who tries to determine if the handwriting is a fake. If the roll fails, anyone who compares the handwriting to a legitimate sample or conducts the proper analysis (*i.e.,* succeeds with an INT Roll when examining it) of it realizes it's a fake. If the roll fails badly (by 4 or more) the forger *thinks* he's done a wonderful job, when in reality the fact that his handwriting is a forgery is obvious given even the simplest comparison or analysis. (Alternately, the GM might grant such persons a +4 or greater bonus to their roll to use Forgery as an Untrained Skill to detect the fake.)

Forging a signature or other small bit of text usually takes a Full Phase, or at most a Turn. Forging longer blocks of text can take minutes, hours, or even days depending on the length of the text.

FORGING MONEY: COUNTERFEITING

While the term "counterfeit" can apply to any fake item, most people tend to use the term "counterfeiting" as a synoym for "creating fake money." While not as glamorous as forging art, counterfeiting can nevertheless be a profitable criminal enterprise.

Counterfeiting Metal Money: Coin Shaving And Clipping

In pre-modern times, before paper money existed (or was commonly used), forgers created fake coins. This required two things. First, the forger needed a mold or press with which to make the actual coins, or the skill to do it himself (in many places and times coins were made individually by hand, a process sometimes known as "hammered money"). Creating one of these often posed less difficulty than the second requirement, acquiring the raw gold or silver with which to make the coins. To obtain it, forgers often engaged in the practices of *coin clipping* or *coin shaving,* in which tiny amounts of precious metal were trimmed from legitimate coins until the forger had enough to create a fake coin. (Forgers often sped up this process by adulterating the precious metal with a non-precious one similar enough in appearance and weight to fool people.) Since coins were made of pure metal and thus got worn down (and lighter in weight) over time, the idea of a coin not being quite as large or heavy as a "new" coin didn't arouse suspicion. The practice of putting milling or reeding (grooves) or text on the edges of coins was devised as an anti-counterfeiting technique; in theory a "marked" edge on a coin proved no one has shaved any metal off the coin. Despite such precautions, the forging of coins continued; for example, according to some estimates, by the time of King George III more fake English shillings existed than real ones. After the mid-twentieth century, when coins stopped being made of actual precious metal, coin shaving and clipping ceased to be a problem.

UNTOUCHED BY HUMAN HANDS?

Some people contend that modern money-printing plates are actually produced mechanically, and have been since at least 1929 (when the US government implemented a plan to reduce the size of its currency by one-fourth [or one-third, sources vary] to its current size) and possibly before then. Obviously at some point in the past plates for printing money must have been made by hand (since the technology didn't exist to manufacture them), as can be seen in the imperfections in old currency. But some people believe that once manufacturing techniques made it possible to make better plates than could be made by hand, the government began making them that way. It maintains the fiction of "hand engraving" to deter forgers.

Typically coin shaving/clipping doesn't require a Forgery roll (or any other sort of roll), though the GM might call for one so the character doesn't so grievously diminish a coin that he makes people suspicious when he spends it. Forming raw precious metal into fake coins requires a Forgery roll, usually unmodified. If the roll succeeds, it functions as the result for a Forgery Versus Forgery Skill Contest with someone who tries to determine if the coin is a fake. If the roll fails, anyone who compares the coin to a legitimate one or conducts the proper analysis (*i.e.,* succeeds with an INT Roll when examining it) of it realizes it's a fake. If the roll fails badly (by 4 or more) the forger *thinks* he's done a wonderful job, when in reality the fact that his coin is a forgery is obvious given even the simplest comparison or analysis. (Alternately, the GM might grant such persons a +4 or greater bonus to their roll to use Forgery as an Untrained Skill to detect the fake.)

Making a single coin by hand takes a Base Time of 6 Hours; the GM can reduce this if the character has presses or molds to do the work with, but creating one of them may require other Forgery rolls. The forger then has to pass or sell the fake money (see below), a sometimes-dangerous practice because it's usually regarded as treason, a capital offense against the crown.

Counterfeiting Paper Money

The introduction of paper money made it easier for counterfeiters to produce fake money in large amounts. For the sake of simplicity, this discussion focuses on United States currency, the type of paper currency used in many game worlds and widely accepted around modern-day Earth. But the basic techniques of counterfeiting (and the tactics used to foil counterfeiters) tend to be the same around the world, and allowing for changes in technology often throughout time. In the early twenty-first century, the euro note has become as favorite a target for some counterfeiters as the American dollar bill.

The United States prints its currency on cotton-linen paper embedded with special red and blue fibers, thus giving it a distinctive feel and (in theory) making counterfeiting more difficult. The printing is done via the *intaglio* method, in which precise lines and marks are engraved into metal plates. This gives the printing a distinctive feel that, again, can be difficult to duplicate compared to simpler methods like offset or lithographic printing.

According to the US government, the plates used to print its money are produced by specially-trained human engravers, each trained to create only part of a plate so no one person can make a plate on his own. (But see the accompanying sidebar.) The actual printing involves passing sheets of money through automatic presses several times, with different layers or colors of ink (or other features) being applied to one side or the other with each pass. The ink is specially manufactured to make counterfeiting US money more difficult.

Until recent years, counterfeiting paper currency could be a lengthy process requiring great skill, especially if the counterfeiter worked alone and had to perform each step of the counterfeiting process himself. Advances in desktop publishing and personal printing technology have made counterfeiting money (and other paper items) much simpler — so simple that very little training is needed, even to the point where some counterfeiters can get around the need to falsify the paper by simply copying/printing a higher-denomination bill on a lower-denomination one. On the other hand, the government has taken steps to make counterfeiting harder, including making changes to the appearance and physical content of currency designed to thwart forgers. Some of these measures include: putting holograms on bills; changing to multi-colored bills; embedding special strips in bills; inks that change color based on viewing angle; microprinting; and specially-printed patterns designed to disable copying devices. Manufacturers of desktop publishing software have added features to make it harder to use their products to copy currency.

Counterfeiters have come up with a variety of methods to make fake money seem real. Since private citizens cannot purchase the paper the government prints currency on, counterfeiters with access to the paper on which securities are printed (which is similar) use it; others select a paper as close as they can get. They print the blue and red fibers onto the paper, thus fooling people who don't look closely. They soak printed bills in water and dry them in clothes dryers to give the paper a feel more like that of real money. Many other methods, chemical treatments, and "tricks" are available to make "funny money" seem as real as possible. Stopping them is difficult. According to some estimates, as much as one-fifth of the US money in circulation is fake, in part because rogue nations like North Korea engage in counterfeiting on an enormous scale to support themselves.

In game terms, counterfeiting paper money is a two-step process. First, the character has to obtain the right equipment and raw materials for the job, or as close as he can get. (Of course he needs an original to work from, but obtaining one is as easy as visiting the nearest bank or store.) The GM may want to play this out (at least once) as an adventure, but if necessary he can simply have the character make a roll. Use the "Sample Quality" section of the Forgery Modifiers table to represent "Materials Quality." As a rough guideline, if the roll succeeds exactly, the character has Average quality materials; if it succeeds by 2, he has Good materials; if it succeeds by 4 or more he has Very Good materials. If the roll fails by 1-3, he has Poor materials; if it fails by 4 or more he has Very Poor materials. The quality of his materials provides a modifier for the second step, creating the funny money itself. If that roll succeeds, it functions as the result for a Forgery Versus Forgery Skill Contest roll made by someone who tries to determine if the money is fake. If the roll fails, anyone with Forgery, a relevant KS, or some other appropriate Skill automatically realizes it's phony; if the roll fails by 4 or more, anyone can tell it's fake. (Alternately, the GM might grant such

persons a +4 or greater bonus to their roll to use Forgery as an Untrained Skill to detect the fake.)

FORGING GOODS

The forging of material goods — clothing, DVDs, credit cards, drugs, and consumer goods of all sorts — is the category of Forgery characters are least likely to learn, but it's the most common in the modern world. Some estimates claim that 5-7% of world trade involves counterfeit manufactured goods, resulting in hundreds of billions of dollars of losses annually. In China alone three to five million people work at counterfeiting goods.

Assuming a forger has access to modern manufacturing equipment — which is not difficult, since most such equipment is perfectly legal to own (if sometimes expensive to buy) — and the appropriate raw materials (again, usually simple to obtain), creating fake goods just requires a Forgery roll. If the roll succeeds, it functions as the result for a Forgery Versus Forgery Skill Contest with someone who tries to determine if an item is a fake. If the roll fails, anyone who compares the fake item to a legitimate sample or conducts the proper analysis of it (*i.e.,* succeeds with an INT Roll when examining it) realizes it's a fake. If the roll fails badly (by 4 or more) the forger *thinks* he's done a wonderful job, when in reality the fact that the item is a forgery is obvious given even the simplest comparison or analysis. (Of course, since many consumers aren't really concerned about whether they buy forged goods or real ones since they get a great deal on the fakes, as long as the item looks reasonably close to the real thing the forger may not have any trouble disposing of it.)

Forging goods usually requires a Base Time of 6 Hours, at least for the first good produced; thereafter mass manufacturing techniques can usually crank the goods out at a rapid pace. Some, like DVDs, may take only 1 Hour for the first one.

Other Uses Of Forgery

Besides creating fake items or documents, characters can use Forgery to detect fakes, and to pass off fakes they've created.

DETECTING FORGERIES

The more a character makes his Forgery roll by, the more time it typically takes to discover the forged item is fake — it may take years or decades in some cases. To uncover a successful use of Forgery, a character investigating the forged item must know Forgery himself, conduct a detailed examination of the object, and win a Forgery Versus Forgery Skill Contest with the forger.

Detecting Art Forgeries

In the case of art, the forgery detective confronts many obstacles. First, the age and uncertain provenance of many items can make analysis difficult. Second, the fact that artists sometimes experiment with styles, change their styles, ape another artist's style, or make multiple copies or "drafts" of a work means that a work that doesn't look *exactly* right could still be legitimate — and while it's bad enough to accept a forgery as real, it's even worse to brand as a forgery a genuine work. Third, if a fake gains acceptance (as they so often do) and remains undetected for a long time, it not only influences thinking about the artist's work, it may inspire *other* fakes, further confusing the picture. Fourth, a fake created in the distant past may give every appearance of genuine age and materials, because it really *is* that old. Some Greek and Renaissance artists, to name just two groups, were master forgers who cranked out fakes by the wagonload; the works of famous artists were often faked during the artists' lifetimes.

Still, all is not gloom. Art detectives have many ways to detect a fake. First, there's scientific analysis of the materials used, which may indicate all sorts of problems — chemicals not in existence at the time of the fake's supposed creation, signs of artificial aging (or that an item is too young), and so forth. Second, scholarly analysis may detect problems with the style and aesthetics of the work. Third, problems with the item's history may give it away, or the fact that it lacks a reasonable history (or, paradoxically, that the history is *too* detailed) may tip an investigator off to look more closely (as may the "discovery" of a "new work" supposedly created by a currently-trendy artist). Fourth, some experts contend that most fakes have at least one stupid mistake that a trained observer can find with careful observation and study of the item coupled with a deep knowledge of art history. Knowledge Skill: Art History, not to mention more specific KSs like KS: Works Of Rembrandt, are invaluable as Complementary Skills.

Some accomplished experts at finding fakes have their own unusual, personal methods of detecting forgeries. For example, some claim they can distinguish a real work of art from a fake one by smelling, tasting, or chewing on the material; others have an "intuition" for fakery that they can't explain in rational terms.

Detecting Other Forgeries

Detecting forged money and documents is usually a simpler matter than detecting forged art. In many cases a close examination, possibly including applying a simple chemical test to the paper, is all that's required to reveal the objects as fake; this may not even require a roll. If the forger's done a really good job, a character may have to perform a minute analysis involving sophisticated tools to discover that the document is fraudulent.

In most cases, characters who specialize in detecting forgeries (particularly of money) have a relevant KS pertaining to the type of money they're accustomed to for use as a Complementary Skill. A character who knows US currency backwards and forwards may have no idea how to evaluate a Japanese yen note or a European euro bill. The same applies to official credentials and other documentation — knowing what a DEA identification card looks like doesn't mean the character's just as well-versed in Interpol cards. Forgery conveys some knowledge of these subjects, but a real expert has relevant KSs as well.

PASSING FAKES

The *Forgery* Skill provides a character with at least some ability to distribute the fakes he creates. When it comes to counterfeit money, this is sometimes referred to as "passing" the fake bills. The easiest way to do this is to spend a large counterfeit bill for a small-value item and receive real money in return as change. However, this method, even when it involves groups of people recruited for the purpose, can be slow and exposes the forger to repeated risk of detection. Safer ways include selling the fake money to organized criminal groups for roughly 10% of its face value, buying large amounts of illegal goods (such as drugs) from criminal groups that can't detect the fake money (especially if it's mixed with real money), or passing large amounts of fake money at a single cash-oriented major event (like a World Series game).

How forgers pass other fakes depends on the object involved. An art forger typically tries to trick a collector or museum into buying his work, or he may partner with an unscrupulous art dealer who does this for him. Forged goods are usually sold into the normal stream of commerce at a discount so the buyer can sell them himself for full normal price and make a larger profit than if he bought the real thing. Forged documents are usually prepared at the behest of a specific person for a specific purpose, and thus don't have to be passed.

To pass a forgery, a character has to make a Forgery roll in a Skill Versus Skill Contest. If the character succeeds, he distributes the fake appropriately; the GM can determine how much profit he makes based on the roll's degree of success. If the roll fails, the character can't find the right outlet for his work or can't convince anyone to pay him for it. Since passing forgeries often involves criminal skills or contacts, the *Streetwise* Skill may serve as a Complementary Skill.

If possible, the GM should encourage characters to roleplay the passing of fakes they create; it can be a lot of fun.

Other Rules

EQUIPMENT

Except for faking a signature (which requires only a writing instrument), Forgery almost always requires considerable amounts of equipment, not to mention appropriate raw materials for the forger to work with (which can be even harder to obtain). For documents and currency, this includes special printing technology or devices, appropriate paper and ink, and the like. For art objects, it means artists' tools, appropriately-aged canvases (or other materials to turn into art), and so on. A character lacking these things may not be able to use Forgery at all, or at the very least suffers substantial "lack of equipment" penalties (see page 33).

Equipment also comes in handy when detecting forgeries. Characters can use all sorts of sensors and other scientific equipment — ultraviolet and infrared lamps, powerful microscopes, carbon dating, chemical tests, and so forth — to reveal that a piece of money, art, or the like is a fake. Some types of anti-counterfeiting equipment is specifically designed for use by laypersons and doesn't require the user to make any sort of Forgery roll (the device itself is built using Forgery with the Limitation *Only To Detect Forgeries* (-1)).

POWERS AND FORGERY

A character with an appropriately-constructed Images ability might be able to use it to create *really* realistic-seeming fakes without needing to use Forgery. Such a power would probably need to be Usable As Attack (so the character could "stick" the power to an object) and Persistent (so it keeps functioning beyond the character's Line Of Sight). A Transform-based forging power wouldn't suffer from these difficulties; the character would just use it to Transform "raw materials into artwork" or the like.

Conversely, a character with Enhanced Senses may have a much easier time detecting a fake. For example, experts often use infrared and ultraviolet scans when testing potentially phony pieces of art; a character who can naturally see IR and UV light may not need their fancy equipment to tell a fake from the real thing.

CONSEQUENCES OF FAILURE

The consequences of failure for different types of Forgery are discussed above.

BASE TIMES

The Base Times for most Forgery tasks are discussed above. The accompanying Forgery Base Times table provides general guidelines based on how simple an object or document to be faked are. After a character has created many copies of the same item or document, the time to create it may fall significantly due to his familiarity with the processes involved (reduce it by up to half).

FORGERY BASE TIMES

Simplicity Of Object	Base Time
Very Complex	1 Month
Complex	1 Week
Average	1 Day
Simple	6 Hours
Very Simple	1 Hour

UNIFYING/SUBDIVIDING FORGERY

The categories grouped together under the heading of "Forgery" aren't necessarily that closely related in terms of the abilities needed to create fakes. In "realistic" campaigns, the GM may want to subdivide Forgery into four separate Intellect Skills: Art Forgery; Counterfeiting (forging money); Document Forgery (excluding handwriting); and Signature Forgery (the faking of handwriting). On the other hand, in some games Forgery won't be a significant aspect of game play. In that case the GM may want to make Forgery a standard Intellect Skill and let a character who pays 3 Character Points have the ability to create fake versions of nearly any object.

FORGERY BY GENRE

Generally, Forgery works the same from genre to genre and era to era. It's just a question of what's being forged, how it's passed, and the tools involved.

Fantasy

Magic opens up all sorts of possibilities for Forgery. A character using an appropriate spell might be able to create perfect copies of objects and documents in mere seconds. On the other hand, anti-counterfeiting spells might make it equally easy to detect forgeries.

Pulp

During the Pulp era, art forgery was a booming business. This was driven by several factors. The French artist Van Gogh was just becoming popular, and that often leads to a rise in forgeries of a given artist. The theft of the *Mona Lisa* from the Louvre in 1911 led to later claims that the real one was kept and a fake recovered; while this is untrue, it's possible that many "real" *Mona Lisa*s were made by Pulp-era forgers and sold to private collectors as genuine. (The increased fascination with da Vinci in the early twentieth century also led to the faking of other works of his.) A 1924 exhibition in London about forgeries, one of the first of its kind, not only gave collectors some idea of what to look out for but showed forgers what mistakes not to make in the future. The rise of big business and vast fortunes, especially in America, led to a spree of art collecting by the *nouveau riche* that created a market for phony works.

Counterfeiting could be big business in the Pulp era. In 1926, a group of Hungarian forgers, eager for revenge against France for its role in the destruction of the Austro-Hungarian Empire, engaged in am industrial-level forging operation to create 10 million fake French francs. They had state sponsorship; Germany and Austria were also involved. The counterfeiters' aim was to use the profits to support militarist and border-changing political causes. Arrests in the Netherlands smashed the ring, and the League Of Nations launched an investigation.

Science Fiction

Forgery is a very technology-sensitive skill. Forgers who can absolutely fool contemporary methods of detection can be easily exposed by high-tech equipment, while a forger trying to beat advanced countermeasures may not even know what he has to fake. Apply the Obsolete And Advanced Technology rules from Chapter One whenever forgers and detectors from differing technology levels are involved.

GAMBLING

Type: Intellect Skill (roll: 9 + (INT/5) or less)
Cost: 2 Character Points for a base roll with one category (or 1 Character Point for a base roll with a specific subcategory); each additional category costs 2 Character Points (and each additional subcategory 1 Character Point); +1 to the roll with all categories and subcategories known per +2 Character Points

A character with Gambling knows how to play non-athletic games and how to win at them by applying his knowledge, skill, and experience. He can play a wide variety of well-known games, and has a knack for learning to play other games with just a little exposure to them. As Gambling's name implies, it primarily applies to games of chance such as poker, blackjack, or craps (particularly when they involve some skill or tactics), but characters can also use it to play other games.

A KS or PS for a particular game (such as KS: Poker Strategies or PS: Play Chess) acts as a Complementary Skill roll to Gambling. As discussed below, Sleight Of Hand is Complementary to attempts to cheat by manipulating cards (or the like). Analyze Style is Complementary for betting on sporting events involving combat (such as a boxing match); Riding is Complementary for betting on horse races.

BUYING GAMBLING

Characters buy Gambling in categories. Each category costs 2 points; individual subcategories (such as Poker) may be bought for 1 point each. The base roll with all categories and subcategories the character knows is (9+(INT/5)) or less; +1 to the roll for all categories costs +2 Character Points. The Gambling Table lists some common categories and subcategories; GMs and players may create others as appropriate.

Using Gambling

Characters use Gambling for four main things: playing games to win; learning new games; cheating (and spotting other cheaters); and betting wisely.

PLAYING TO WIN

First and foremost, characters use Gambling to win when playing games. Skill, knowledge, and experience can't necessarily counteract all the random factors in a game, particularly in games of chance, but as far as he's able to a character with Gambling tilts the odds in his favor, uses the right strategy and tactics, pays attention to and exploits other players' habits and foibles, and so forth.

When a group of characters plays a game, characters with Gambling make their rolls as normal, modified using the information in the Gambling Modifiers table. Characters who don't have Gambling can make a PS related to the game at -3 (or an INT Roll at -4) plus the same modifiers characters with Gambling suffer from. The character who makes his roll by the most wins the game (or a particular "hand" or "round" of the game, if appropriate).

Winning Money

In many cases, the games for which characters make Gambling rolls are games on which the players bet money. The GM should establish a "stake" amount that represents the value of bets placed in the game. For a friendly neighborhood poker game it might be five dollars; for a high-stakes professional or backroom poker game it might be $10,000, $100,000, or even a cool million dollars. Add up the amount by which all characters who

GAMBLING TABLE

Card Games
Baccarat/Chemin de Fer
Blackjack
Bridge
Canasta
Cribbage
Euchre
Faro
Hearts
Pinochle
Poker
Rummy
Spades
Spanish Monte
Whist

Dice Games†
Craps
Fan Tan
Hazard (Chuck-A-Luck)
Dominoes Games
Dominoes (Western)
Pai Gow
Tien Gow

Board Games
Backgammon
Checkers/Draughts
Chess
Go
Parcheesi (Pachisi)
Xiangqi (Chinese Chess)

Sports Betting
Baseball
Basketball
Boxing
Chariot Racing
Dog Racing
Football
Horse Racing

Miscellaneous Games (cannot be bought as a category)
Bingo
Keno
Mahjongg
Roulette

†: "Dice Games" don't literally have to involve dice as modern humans think of them, just some sort of object that's thrown or rolled to generate a number or some other random result upon which the game is based. Historically people used stones, peach pits, sticks, seeds, bits of bone or horn, nuts, teeth, shells, and similar objects to play the sorts of games that are played today with dice.

failed their rolls did so, then multiply that by the stake to get a "pot." Add up the amount by which all the characters who succeeded with their rolls did so, then divide the pot by that amount to determine "shares." Every character who succeeded with his roll receives one share for each point he made his roll by. In the event that no character fails his roll, the GM determines some threshold for "losing" (such as "all characters who didn't make their roll by 4 or more are considered losers") and then determines the shares as described above.

Example: *Fat Louie, Eddie the Weasel, Big Vic, Joey Craps, Nickie T, and Red sit down to play a few hands of poker. Eddie, Joey, and Red are experienced cardplayers who have Gambling (Card Games); the others just like to play cards (they have PS: Play Poker). It's a fairly high-stakes game, though, so the GM sets the "stake" at $100. All the characters make their Gambling or PS: Play Poker rolls (the latter suffer a -2 penalty). The GM rules that poker is a game of "Average" complexity, so no penalty applies for that, and all the players have played many times before. Fat Louie makes his roll by 3, Eddie makes his by 6, Big Vic fails by 2, Joey fails by 3, Nickie makes his by 1, and Red makes his by 2. The total points by which rolls were missed is 5 (Vic's 2 and Joey's 3), so the pot is (5 x $100 =) $500. The total points by which rolls were made is 12, so everyone who made his roll wins ($500/12 =) $41.67 per point he made his roll by. For example, Eddie's the big winner on the night with $250.02 in his pocket.*

Ideally the amount won should equal the amount lost, or close to it. The GM may alter the results as necessary to make this occur. The GM should also adjust the results as necessary to maintain campaign balance and advance the game's storyline properly. Allowing characters to win large sums of money based on just a dice roll or two could significantly unbalance the game, so regardless of Skill Rolls the GM shouldn't allow it unless it helps the game.

House Advantage

Many games of chance aren't set up to play fair — their rules favor the casino, dealer, or person in charge of the game. This is referred to as a *house advantage* and makes winning at such games more difficult. The GM should impose a -1 to -3 penalty based on just how strong the house advantage is for a particular game. Seasoned gamblers often learn to avoid games with a heavy house advantage, instead favoring ones in which strategy or skill can lead to victory more consistently.

GAMBLING MODIFIERS

Complexity Of Game	Modifier
Very Simple	+2
Simple	+1
Average	+0
Complex	-2
Very Complex	-4
Character's Experience	**Modifier**
Has never played game before	-3
Has played game once before	-2
Has played game 2-4 times before	-1
Has played game 5+ times before	-0
Other Modifiers	**Modifier**
House advantage (see text)	-1 to -3

LEARNING NEW GAMES

A character with Gambling is better at learning a new game than most people, partly based on experience and partly on his natural "knack" for games. After playing a new game for 1 Hour, he may make a Gambling roll modified by the complexity of the game. If he succeeds, for the rest of his session of play treat him as if he had "played the game once before" (*i.e.,* reduce the experience penalty from -3 to -2). The next time he plays he counts as having "played the game 2-4 times before." The third time he plays he counts as "having played 5+ times before" and suffers no further penalty for inexperience.

CHEATING

Characters with Gambling not only know how to play and win a game legitimately, they know how to win by cheating. In some times and eras, such as the Wild West, this is a common way for professional gamblers to make money. Some are so skilled at such devious methods of cheating that there's really no "chance" left in the game at all — it's just a question of how quickly the suckers lose their money.

To determine the results of cheating, have any character who wishes to cheat make his Gambling roll. Any character whose roll succeeds may use that result as a Complementary Skill roll for the roll to determine who wins the game (see above). At the GM's option, only the character whose roll succeeds by the most may use the result to aid his roll to win; this tends to lead to big winnings for one person instead of spreading the pot around.

In some cases cheating involves a device (like a gadget that can control a roulette wheel) or clever manipulation of cards or dice via sleight of hand. To use such methods, a character needs more than Gambling — he needs the device or the *Sleight Of Hand* Skill. In the latter case, use Sleight Of Hand as Complementary to Gambling.

Spotting A Cheat

If a character's roll to cheat fails, any character who succeeds with a PER Roll realizes he tried to cheat. At this point the best the character can usually hope for is to get thrown out of the game without his money; at worst he could be badly beaten or even killed.

If a character's roll to cheat succeeds, only other characters with Gambling have a chance to realize what he did. They may make Gambling rolls to detect the cheating, with their own PER Rolls as Complementary. If they succeed, they realize who cheated and how; if they fail, they remain oblivious to the cheating.

At the GM's option, once a gambler realizes someone is cheating, he can engage that person in a Gambling Versus Gambling Contest. If he wins the



Contest he "turns the tables" on the cheater, taking away his advantage for at least one round of play and obtaining that advantage for himself instead. If he loses, the cheater keeps control of things and goes on winning.

In situations where the character's playing in/betting on a rigged game, he can make a Gambling roll to perceive that after participating for at least 1 Minute (and perhaps longer, based on how long it takes to play the game). If he succeeds, he realizes the game's rigged somehow (and thus that he should get out — unless the GM specifically permits him to, he can't usually turn a rigged game back on the perpetrators and beat them). If he fails, he goes on playing thinking the game's legit.

BETTING WISELY

Some games, such as roulette or the numbers, are totally random — there's absolutely no way to win them based on skill, experience, tactics, or strategy. In that case Gambling doesn't help a character much. He makes a Gambling roll. If he scores a Critical Success (or, at the GM's option, the roll succeeds by half or more), he actually wins by pure dumb luck. Any lesser level of success, not to mention failure, means he loses. However, if the roll succeeds, he loses his money more slowly — at a 10% slower pace per point by which he succeeded. In short, in this situation Gambling gives the character a little more entertainment for his money, but that's about it. However, if the character uses his Gambling to cheat, as described above, he can win such games consistently... though that's a sure way to draw suspicion to himself if he's not careful.

For sports betting, Gambling means a character knows the best strategies and tactics for betting on sports matches, how to play the odds, and how to evaluate a team's chances of victory. It does *not* mean he can succeed with a roll and dictate which team wins. (A truly professional sports gambler also has lots of KSs pertaining to the sports he bets on.) When he places a bet, he tells the GM how much he wants to bet and then makes his Gambling roll. If the roll succeeds, he earns 20% of his bet for each point by which he made the roll. If the roll fails, he loses 20% per point he failed by.

Other Rules

EQUIPMENT

Gambling doesn't normally require equipment beyond whatever's necessary to play the game — it's a purely personal Skill. However, devices for cheating, usually bought as bonuses to the Gambling roll with the Limitation *Inobvious Focus,* are myriad. A few examples include: cards that are marked or altered in various ways so the cheater knows who has which cards; weighted dice; "holdout" devices that keep a card under the table or up the gambler's sleeve for an opportune moment; and card-counting computers concealed in clothing. (See page 386.)

POWERS AND GAMBLING

A number of Powers may make it easier to use Gambling, particularly to cheat. Characters with Stretching, an Extra Limb, or some other metamorphic powers may find it easier to manipulate cards or hide a holdout card. Enhanced Senses like N-Ray Vision may make it easy to see another character's cards. Telekinesis and Teleportation with Invisible Power Effects allow a character to manipulate dice, cards, roulette wheels, and the like without having to touch them; the same applies to cyberkinetic powers if a game involves a machine with moving parts.

CONSEQUENCES OF FAILURE

The sections above describing what a character can do with Gambling cover the possibility of failure in specific instances. In general, remember that failure by 1-3 tends to be an ordinary failure — annoying and inconvenient, but not necessarily detrimental. A bad failure (by 4 or more) can have significant negative consequences or lasting impact on a gambler.

BASE TIMES

The Base Time for Gambling depends on the game being played. Placing a bet on a horse race or football game may only take a few seconds; a single hand of poker may take a few minutes; board games vary based on complexity. A session of cards or dice can easily last for hours, or in the case of hard-core gamblers days.

UNIFYING/SUBDIVIDING GAMBLING

Since few roleplaying game campaigns place a heavy emphasis on characters playing games, some GMs may find it more convenient (if not necessarily "realistic") to convert Gambling into a standard Intellect Skill. For 3 Character Points a character would buy an INT-Based Roll that he could use to play any sort of game, place any sort of bet, or the like.

If a campaign does happen to focus heavily on games of chance, such as a campaign where the PCs are all casino employees in Las Vegas, the GM might subdivide Gambling further, requiring characters to buy it a separate 3-point Intellect Skill for each category of games (similar to Fast Draw), or even one Intellect Skill for each game.

GAMBLING BY GENRE

Although the games played (and in some cases the technology used to play them, or to cheat at them) may change from era to era and genre to genre, Gambling itself works the same.

Fantasy

In Fantasy settings, the existence of magic raises all sorts of possibilities for cheating... or detecting cheats. The focus of winning at games of chance may become not who's the better gameplayer, but who's the better wizard!

Martial Arts

Martial artists looking for a greater understanding of strategy and tactics usually learn any one of several tabletop games. Skill with any one of these games usually means the character is a man of some intelligence and learning, and often helps him make a good impression on a host. The games (all Board Games) are:

Go-Moku (also known as *Renju*), a game where the objective is to place five colored stones in a row

Hasami Shogi, similar to *Go-Moku,* with the same victory conditions

Mahjongg (or *Ma-Jong*), a tile game roughly 3,000 years old with a complex scoring system; popular among gamblers

Wei-Ch'i ("way chee"), or *Go*

Xiangqi (or Siang K'i) — Chinese chess, similar to European chess, but with a game board divided by a river and featuring units such as cannon and chariots

Of these games, *Wei-Ch'i* is the most important. Better known by its Japanese name, *Go,* it's an abstract game of territorial conquest which was a common pastime for samurai. In Japan a master of *Go* (in *HERO System* terms, "mastery" means at least Gambling (Wei-Ch'i) 14-) can find plenty of employment as an instructor (even today), and it's possible to live as a professional *Go* player.

Western/Victorian

Gambling was extremely popular in the Wild West, with a "gambler's round" of cities and towns where the action was hot and a skilled gamesman could make a tidy living at the gaming table. Popular games included poker, faro (*a.k.a.* "bucking the tiger," due to the tiger painted on faro dealers' card boxes), Spanish monte, lansquenet, blackjack, craps, and hazard (also called "chuck-a-luck"). The gambler (riverboat or otherwise), with his fancy clothes, diamond tie-tack, gold watch, and social aplomb, is a popular Western archetype.

HIGH SOCIETY

Type: Interaction Skill (roll: 9 + (PRE/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

Characters with this Interaction Skill know about upper-class culture and how to interact with it. This includes knowledge of etiquette and social customs as well as information about who's who in "society." It allows a character to analyze upper-class groups to determine relative rank and status, social relationships, and so forth, and in some cases even to engage in verbal "social combat" with another member of the upper class.

Society

As stated above, High Society applies to the "upper class" and "society." Each GM should define exactly what that means for his campaign, but in general it includes:

■ royalty

■ nobility and others of high social rank

■ the wealthy (particularly the fabulously wealthy)

■ top-ranking business executives and similar professionals

■ politicians and diplomats

In many cases, position in "society" is a hereditary thing, either the result of titles handed down from father to son or vast riches given to or inherited by children (and who in turn one day pass them on to their own children). While being in the upper class often equates to being rich (*i.e.,* to having the *Money* Perk), the two aren't necessarily connected. More than one nobleman has lived a life of "genteel poverty" as the result of possessing few resources or his ancestors having spent the family fortune in years past.

Naturally, the upper class tends to be rather exclusive. Characters perceived as belonging to it will have an easier time fitting in and gathering information than those not so perceived (see the High Society Modifiers table). Similarly, a character may have to acclimate to a new social group before he can use High Society properly. For example, if a Fantasy character visiting a strange court who has no prior knowledge of the names of its nobles, learning them may take time regardless of how much he makes his roll by, and he may not immediately have the subtle understanding of court interactions that's important to this Skill. The GM may impose penalties of -1 to -3 (see the High Society Modifiers table) if characters have spent less than 1 Month with a group. An appropriate KS negates this penalty, as does spending 1 Month (or possibly less) with that group.

Cultural Differentiation

As a default, High Society gives a character the ability to use the Skill in *any* upper-class social situation, regardless of the culture involved. (But see *Subdividing High Society,* below.) However, characters typically learn High Society for their native culture and time. Social customs and etiquette can vary wildly from one human culture to another, and even within some large cultures — and that doesn't even take into account the possibility of life on other worlds/dimensions or involving non-human sentient species. Therefore the GM may impose penalties on a High Society roll when a character uses the Skill in a culture different from his own (see the High Society Modifiers table). A character with an appropriate Knowledge Skill (usually a Cultural Knowledge, but at the GM's option possibly an Area/City Knowledge) does not suffer these penalties for that culture, and in fact those Skills may serve as Complementary.

These rules assume that circumstances don't prevent a character from using High Society for some reason. For example, if a character is physically unable to consume another species's food, there's no point to making a High Society roll to use the right table manners — best just to sit there and make small talk with other diners. See also *Science Fiction,* below.

With the GM's permission, a character may be more familiar with a particular foreign culture than with his own. For example, an American raised in China might understand Chinese etiquette and social structure better than those of the United States.

High Society And Other Skills

High Society often interacts with or serves as Complementary to other Skills (particularly other Interaction Skills). Some disguises or uses of Acting only work if the character also has High Society (or at least are much less convincing without it). In settings where bureaucrats and officials are high-ranking members of society, or in cultures like medieval Japan where knowing *how* to talk to someone is as important as knowing who to talk to, High Society is Complementary to Bureaucratics (and often to Bribery as well). It may Complement Area, City, and Cultural Knowledge Skills, and is often Complemented by them in turn.

USING HIGH SOCIETY

The main uses of High Society are: to reflect a character's knowledge of etiquette and social customs; to represent a character's knowledge of who's who in society; a character's ability to discern relationships among the upper class, and to ferret out secrets about its members; and with the GM's permission to engage in "social combat" with another character who has High Society.

Etiquette And Social Customs

First and foremost, High Society represents a character's ability to get along in upper-class social situations (and if necessary to pass himself off as a member of the upper class) by drawing on his knowledge of etiquette and social customs appropriate to the culture and gathering. This includes things like:

■ how to conduct one's self in upper-class social situations generally, such as making interesting small talk and behaving politely toward others (often others of exalted rank who are prickly about their social perks)

■ what type of clothes to wear, how to accessorize them, and in general how to present one's self in terms of appearance

■ table manners: which fork to use for shrimp, which course comes first in a meal, how to eat with elegance and decorum

■ how to address and interact with royalty, nobility, and other persons with special social privileges

■ what's "in" with the upper class: what are considered "sophisticated" drinks, where everyone's going on vacation these days, the general "social round" of parties and events, and so forth

In short, successful High Society rolls are crucial for a character who wants to get into those special parties... and just as importantly, get invited back!

Who's Who In Society

Second, a successful High Society roll tells a character "who's who" in the upper class. This covers two general subjects. The first is who the people in the upper class actually are, and some basic facts about them, particularly regarding what makes them upper class ("Him? He's the Duke of Buckminster, tenth of the line I believe" "That's B. Wilcox Russell; he owns Amalgamated Federated Industries and is the richest man in Abbotswood"). Second, he's aware of the positions in the general social structure, who outranks who, and so forth. For example, he'd know that a prince generally outranks a duke... but he'd also know that thanks to his wealth, landholdings, vassals, and influence, Duke Buckminster is so powerful that he's second only to the king in all the land.

Using either of these functions takes a Half Phase. If the roll succeeds, the character knows what he wants to know. If it fails, he's not aware of that information; if it fails badly (by 4 or more) he makes a mistake that may hurt him later on — for example, he misidentifies a powerful nobleman as a nobody (or vice-versa).

Related to this is knowledge of social protocol. A character who succeeds with a High Society roll understands who outranks who and how to treat people accordingly — for example, how to arrange the seating chart at a formal dinner so no one is offended by his position (or at least that as few people as possible are offended).

Goings-On Among Society

Third, characters with High Society are attuned to the way upper-class people act and to the social dynamics of upper-class groups. After spending at least 1 Hour interacting with a group of upper-class persons, a character can make a High Society roll. If he succeeds, he gains some insight into what's going on among the group — who likes or dislikes who (no matter how they actually act in public), who's secretly having an affair with who, who's worried about something related to the group, and so on. The more the roll succeeds by, the more the character learns, though he rarely learns anything specific or definite; it's more like having strong hunches or making educated guesses. If the roll fails, the character learns nothing; if it fails badly (by 4 or more) he leaps to a mistaken conclusion.

Once a character has properly assessed the dynamics of an upper class group, the GM might allow him to try to manipulate that group to suit his own purposes. Usually it's best to handle this through roleplaying, but if appropriate to the campaign the character might simply have to succeed with a High Society roll to get some or all of the group's members to think or act the way he wants them to.

Digging Up Dirt

Fourth, a character with High Society knows how to learn things and uncover facts about members of the upper class. This typically requires spending at least 1 Hour with members of the upper class teasing out gossip and confidences (Conversation serves as a Complementary Skill), learning about the history of the group, and the like. The character may supplement this with more mundane research if necessary. Then he makes a High Society roll. If he succeeds, he learns a juicy fact or two — the more the roll succeeds by, the more the character learns (or the juicier the secret is). A character can't learn just anything this way; if a member of the upper class has a secret he hasn't told *anyone* about it isn't revealed because a PC succeeded with a Skill Roll. For something like that, at best the character would have to spend a *lot* more time looking into things before he could roll, and if he succeeded would only learn "So-and-so has a secret," not what the secret is. If the roll fails, the character doesn't find anything out; if it fails badly (by 4 or more) he learns something that's wrong but thinks it's correct.

Social Combat

Fifth, with the GM's permission High Society can also represent a character's skill at "social combat": witty repartee, forcing one's enemies and rivals into embarrassing situations, and the like. This works best in some Fantasy campaigns

HIGH SOCIETY MODIFIERS

Situation	Modifier
Class Status: Character Is Perceived As...	
...being "upper class" himself	+0
...being "upper class" and of very high rank	+0
...being of lower class	-1 to -3
Experience	
Character has never interacted with this group	-3
Character's interacted with this group a few times	-2
Character's interacted with this group for less than a month	-1
Cultural Differentiations: Culture Is...	
Very Similar to character's own	+0
Similar to character's own	-1
Dissimilar to character's own	-2
Very Dissimilar to character's own	-4
Completely Dissimilar to character's own	-6
...of a different species/planet/dimension	-1
Information Is...	
Extremely Secret	-6 to -8
Very Secret	-3 to -5
Secret	-1 to -2
Neither Secret Nor Known	+0
Known	+1
Widely Known	+2



and other roleplaying-heavy campaigns that focus on the upper elements of society, but it may be suitable for other genres as well. Generally you should roleplay this sort of interaction, but in some circumstances the GM may want to have the "combatants" each make High Society rolls, adding +1d6 to their Presence Attacks for each point by which the roll succeeds (or subtracting -1d6 for each point by which it fails). Then they roll Presence Attacks; the character with the best result wins the "duel."

The above rules work best when both characters have High Society. If one of the "combatants" doesn't, he can substitute a PRE Roll at -2 instead.

EQUIPMENT

High Society doesn't involve equipment; it's a purely personal Skill.

POWERS AND HIGH SOCIETY

As with most Interaction Powers, a touch of Mental Powers — especially if a character can conceal their use — can work wonders in conjunction with High Society. It's much easier to evaluate, learn from, and even manipulate a group (or its members individually) with a little Mind Control, Telepathy, or Mental Illusions.

CONSEQUENCES OF FAILURE

Some consequences of failed High Society rolls are listed above. In general, if a character fails a High Society roll made to determine the extent of his knowledge or his ability to gather information, a failed roll means he doesn't know, can't remember, or can't learn the fact(s) in question. (At the GM's option in the case of forgotten facts, the character can make an INT Roll as Complementary to get a bonus to his High Society roll so he can try again.) A badly-failed roll (by 4 or more) means he makes a mistake — the answer he thinks he has, or the information he gathers, are wrong (and the worse the failure, the more humiliating or dangerous the error).

If a High Society roll pertains to knowing and using the right social custom, rule of etiquette, or the like, failure means the character doesn't know what to do (or at least isn't sure). A badly-failed roll (by 4 or more) means he's wrong and ends up committing a *faux pas* (usually an embarrassing one — the worse the failure, the worse the gaff).

BASE TIMES

The Base Times for typical High Society tasks are listed above. The GM can modify them upward if the group in question is particularly large, complex, or secretive.

SUBDIVIDING HIGH SOCIETY

For some campaigns it may be more "realistic" or appropriate for the GM to require characters to buy High Society by categories. The categories are defined by culture (or perhaps by species, in multipe-species campaigns). The first category costs 2 Character Points for a PRE-Based Roll, each additional category costs +1 Character Point. Thus, characters would buy High Society (Arabic Culture) or (Orc Culture) or (Martian Culture). In some cases, the GM may allow a character to make a roll for a culture he hasn't bought, but which is similar to one he had bought, at a -2 or greater penalty.

HIGH SOCIETY BY GENRE

In many ways, High Society functions the same from genre to genre. There will always be powerful and wealthy persons, and thus always some need to interact with them.

Fantasy

Many Fantasy games rename High Society as *Courtier.* Using it to assess the social dynamics of the court gives the character knowledge of, and insight into, court intrigues, politics, and personalities. A character could make a Courtier roll to figure out who at court is an ally of the Queen, what sort of plot the Royal Wizard is hatching based on his movements and contacts, or to remember the names of all the minor nobles from the Western Marches.

High Society can also help mystics treat with gods, faerie-folk, and other powerful supernatural creatures who value social graces (or at least proper subservience). Offending the king is bad enough; offending a god or spirit may make the character's life an unending hell.

Science Fiction

What constitutes "the upper class" and how to behave properly in it and interact with it aren't just culture-specific, they're time-dependent. Time travelers, dimension-hoppers, and interstellar tourists may experience serious problems. Unless a character has an appropriate Area Knowledge or Culture Knowledge for a time period more than a century removed from his home era, he suffers penalties to his High Society rolls — typically -1 per 100 years or fraction thereof, but this may depend on the "realism" level of the campaign. For example, a cinematic time traveler's penalty is never more than -2, no matter how far back he goes.

Similarly, as noted in the High Society Modifiers table, an "alien" culture (one on a planet other than the character's own, or that he's raised on) typically suffers at least a -1 in addition to the standard cultural differentiation penalty. In a cinematic campaign, characters' penalties may be capped at -2 (-1 for different planet, -1 for different species). In realistic settings (Cyberpunk or Hard SF, for example) the penalties are steeper: -3 for all alien cultures, with an additional -2 if the aliens have different dietary habits or environmental requirements.

INTERROGATION

Type: Interaction Skill (roll: 9 + (PRE/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

A character with this Interaction Skill can extract information from people against their will. (For situations where characters voluntarily expose themselves to situations where they might reveal something they don't want to, such as an interview, use Conversation; see page 142.) He knows about the different methods of interrogation, the equipment involved, and if necessary how to avoid leaving marks. He can judge how close a victim is to death or breaking, and is an expert at manipulating subjects into revealing the information he wants.

Many uses of this Skill aren't very heroic. In many campaigns only villains buy Interrogation.

METHODS OF INTERROGATION

A character with Interrogation knows a wide variety of methods by which to extract information from an unwilling subject. These include:

Manipulation

The easiest method of Interrogation (at least on the victim) is psychological and social manipulation. This typically occurs in an interrogation-style setting where the character can "grill" a subject with repeated questioning, attempts to trick the subject into giving up information, efforts to turn one subject against another by revealing tidbits of information provided (or supposedly provided) by the other subject, and so forth. In some cases this may escalate to hot lights shone directly in the subject's face, sleep deprivation, starvation, constant loud noises, and other abusive practices. This method counts as a Standard or Aggressive Interrogation (see below).

Usually this form of Interrogation occurs in a controlled situation where the questioner has the subject at a disadvantage. In some cases it may apply outside such conditions when the questioner has some authority or opportunity to force his attentions on the subject: "Where were you at 2:00 PM last Thursday, Mr. Smith?".

Torture

When many people hear "interrogation," they hear "torture," and there's no denying that using physical pain to get someone to reveal information is part of a thorough interrogator's bag of tricks. A character with Interrogation knows how to use pain — from simple slaps and punches all the way up to some of the most fiendish devices ever devised by man — to force a character to talk. (Though using torture means running the risk of the subject lying to the interrogator just to get the pain to stop.) This method counts as an Extreme or Severe Interrogation (see below).

In some situations, a character using torture can make his Interrogation roll at a penalty (see below) to avoid leaving "marks" — obvious physical evidence — that someone tortured the victim. This is most common with an Extreme Interrogation

that doesn't rise above the level of a beating. With many forms of Severe Interrogation, not even the torturer's best efforts can hide the signs of torment. Some injuries really only have one explanation.

Besides simple methods of pain infliction (beating, whipping, burning...), a character with Interrogation knows about a wide variety of torture devices, such as:

The Boot: A device made of wood or iron used to encase the leg and/or foot. By turning a crank, the torturer could crush the encased portions of the body. Victims often lost the ability to walk or limped for the rest of their lives. Sometimes the boot was filled with boiling water or tar before being fitted to the subject.

Iron Maiden: A man-sized cabinet with spikes on the inside in specific locations. When shut into it, the spikes pierced the subject but by design missed the vital organs, causing suffering, bleeding, and pain. In some versions the spikes were moveable and so could cause different types of injuries for different crimes, or allow the iron maiden to function as an instrument of execution.

Manacles: Also known as the gauntlets, this was a pair of locked iron fetters that were fastened around the subject's hands. The subject was then suspended from a ceiling or high point on a wall, causing extreme pain. Some even worse versions suspend the victim from the thumbs.

The Rack: A table with winches on each end. The victim is strapped down, his limbs extended and tied to the winches. By cranking the winches, the torturer gradually pulls the victim's joints apart, resulting in an agonizing death if the process is not stopped in time (and often permanent physical problems even if the subject survives). Some survivors lost the use of their hands or legs; some gained an inch or more in height. Because it allows for a gradual increase in prolonged pain, the rack is a highly effective method of torture (+1 to Interrogation rolls).

The Scavenger's Daughter: Sort of the opposite of the rack, this is a simple iron frame placed around a body that constricted it, forcing it into a sort of fetal ball in a painful way that could lead to bleeding from the fingertips and mouth. Manipulating some of the bars could cause further pain.

Strappado: The subject's hands are tied behind his back and he is then hung from the ceiling, sometimes with weights attached to his feet. Intense pain, and possibly dislocation of the arms, results.

Thumbscrews: A sort of small vice in which an upper part slides down over three vertical rods. The subject's thumbs are placed between the rods, and the upper bar tightened down upon them, crushing them. Like the rack, it allowed for gradual increases in pain. Could also be used simply for restraining prisoners.

While using Interrogation-as-torture implies that a character inflicts pain for the specific purpose of extracting information from a subject, if necessary a character can simply use it to inflict pain for the sake of causing torment.

High-Tech Interrogation Devices

Depending on the campaign, setting, genre, and time period, a character with Interrogation may also know about the use of interrogation drugs ("truth serum" and the like) and similar methods. He may also know about mind control devices, brainwashing machines, hypnosis helmets, and the like. "Advanced" societies capable of building such devices might also build ones specifically to cause pain, perhaps by direct nervous system stimulation so that they leave no physical traces whatsoever. If those sorts of devices exist in the campaign, a character with Interrogation knows how to use them. Some Sciences or other technical Skills can be Complementary to this form of Interrogation.

CATEGORIES OF INTERROGATION

For game purposes, any use of Interrogation falls into one of four categories depending on intensity: Standard; Aggressive; Extreme; and Severe.

A *Standard* Interrogation involves a thorough "grilling" of the subject (like the ones seen in many television cop shows) and/or psychological and social manipulation. In some campaigns it would include the use of mindreading and brainwashing devices. The victim is not made to feel physical pain or discomfort. This has a Base Time of 20 Minutes and provides a +1 bonus to the Interrogation roll.

An *Aggressive* Interrogation supplements the Standard method with techniques such as bright lights, loud noises, sleep deprivation, starvation, and physical discomforts like being tied to a chair. However, the deliberate and systematic infliction of pain is not involved. This has a Base Time of 1 Hour (though some effects, like sleep deprivation, require longer periods to take effect) and provides a +2 bonus to the Interrogation roll.

An *Extreme* Interrogation involves low-level torture, such as beatings and whippings, working the victim over with brass knuckles or a rubber hose, and so forth. The victim typically loses ½d6 points of BODY from the effects. This has a Base Time of 20 Minutes and provides a +3 bonus to the Interrogation roll. If the interrogator wishes to leave no obvious physical traces on the subject, he must make a separate Interrogation roll at -2 to avoid doing so.

A *Severe* Interrogation involves the full panoply of physical torture methods, including the rack and other devices described above. The victim typically loses 1d6 points of BODY from the effects and may suffer Impairing or Disabling wounds that can have permanent effects. This has a Base Time of 20 Minutes and provides a +4 bonus to the Interrogation roll. If the interrogator wishes to leave no obvious physical traces on the subject, he must make a separate Interrogation roll at -5 to avoid doing so.

USING INTERROGATION

When a character uses Interrogation, he engages in a Skill Versus Skill Contest pitting his Interrogation against the subject's EGO Roll. The Talent *Resistance* helps the subject resist Interrogation. Depending on the methods a character uses, Conversation, Persuasion, SS: Pharmacology/Toxicology, SS: Psychology, and similar Skills might act

as Complementary Skills to Interrogation. A character's *Reputation* Perk can also enhance his chance to successfully Interrogate someone.

If a character's Interrogation roll fails, there's no need for the victim to resist. In fact, a badly-failed roll (by 4 or more) may indicate not just failure to get the information, but a hardening of the victim's resolve so that all later Interrogation rolls are at a -1 or greater penalty. If a character's using Extreme or Severe methods, a bad failure may indicate he accidentally killed the subject before learning what he wanted to know.

Rather than reducing an interrogation session to a single throw of the dice, the GM may want to extend the process by requiring multiple Interrogation rolls to represent the character's progress through various stages of the questioning process. For example, maybe each roll gets the character one-fourth (25%) of the way toward breaking the subject, so that it takes four successful rolls to make the victim tell what he knows. If the character escalates to the next level "up" the intensity of Interrogation (Standard to Aggressive, Aggressive to Extreme, and so forth), the next roll after the escalation gets the character half (50%) of the way toward breaking the subject.

Evaluating The Subject

While interrogating a subject, a character with Interrogation can observe him, looking for the subtle signs that the subject's just about to reveal what he knows... or the physical indicators that he's at risk of dying. This requires an Interrogation roll, usually unmodified, and at the GM's discretion based on INT rather than PRE. If the roll succeeds, the character knows how close the subject is to breaking down and spilling his guts; if it fails, he judges this incorrectly, to his detriment and possibly to the subject's as well. Characters can also roll to gauge the subject's physical condition, with Paramedics as a Complementary Skill. Success means the interrogator can roughly estimate how much BODY the subject has left, and thus how much more it's likely he can take assuming a standard individual with 8-10 BODY. (If the interrogator knows in advance that a subject's particularly tough — *i.e.,* that he has more BODY than an ordinary person — he can adjust his estimates to suit.) If he fails he misjudges this, meaning he thinks the subject can take more than he really can (and thus that he'll probably torture the subject to death without meaning to).

Similarly, a character with Interrogation can evaluate whether the subject has told the truth under interrogation. If the subject has no reason or motivation to conceal the truth, this requires an unmodified Interrogation roll. If it succeeds, the character knows the subject's "confession" was truthful or not (though he doesn't know the truth if the subject lied, he just knows a lie was told). If it fails, he thinks a truthful subject lied, or that a lying subject told the truth. If the subject wants to hide the truth but pretend he's telling what he knows, judging his truthfulness requires a Skill Versus Skill Contest pitting the character's Interrogation against the victim's Acting (or his PRE Roll at -2 if he doesn't have Acting).

Performing any type of evaluation of the subject has a Base Time of a Full Phase.

Interrogation As Intimidation

At the GM's option, you can expand Interrogation into a more general "intimidation" Skill. Whenever a character wants to cow, overawe, or intimidate someone with the force of his personality, threatening demeanor, or the like, he can make an Interrogation roll. If the roll succeeds, he gets +1d6 on an appropriate Presence Attack made that same Phase against the victim; for every additional point by which the roll succeeds he gets another +1d6.

EQUIPMENT

Interrogation usually involves some sort of equipment. A routine grilling at the police station or a beating adminstered with the fists don't, but to use a hypno-chair, thumbscrews, or the rack a character has to have them (or access to them). A character with Interrogation knows how to build various torture and information-extraction devices appropriate to the setting and era, and can do so if he has the necessary raw materials, tools, and time.

POWERS AND INTERROGATION

A character with Mental Powers like Telepathy and Mind Control may have no need for Interrogation (or could buy Interrogation to represent a low-level use of such powers rather than their standard use). Powers that cause pain or inflict fear may make using Interrogation easier or remove the need for equipment.

CONSEQUENCES OF FAILURE

The consequences of most failed Interrogation rolls are discussed above. Remember that failure should hinder the character, not necessarily make things worse for the subject. It might mean that the subject dies, but it could just as easily mean the character's done something that makes the victim so resistant to giving up his information that he can withstand even the most brutal torture.

BASE TIMES

The Base Times for various Interrogation-related tasks are listed above.

SUBDIVIDING INTERROGATION

In campaigns where GMs would like characters to know about interrogation (the questioning of suspects and the like) but not outright torture, you can split this Skill into two distinct Interaction Skills: *Interrogation,* which covers all the non-violent methods described above (Standard and Aggressive Interrogations); and *Torture,* which covers the violent, pain-based methods (Extreme and Severe Interrogations). In campaigns with brainwashing devices and the like, using them may be a separate Skill or an aspect of Interrogation.

INTERROGATION BY GENRE

For the most part Interrogation is the same from genre to genre. It's just a question of what sort of technology is available and what methods of Interrogation are deemed socially acceptable (and thus how characters tend to react to them).

Fantasy

In many Fantasy settings, gathering information from a prisoner isn't a very subtle process. Thus, most *Fantasy Hero* GMs rework this Skill as *Torture,* since it concentrates almost wholly on forcing a subject to talk by causing him physical pain. In some cases magic may also factor into the process, but usually if an interrogator has access to magic he can simply ensorcel the subject to reveal the information without the need to cause pain.

Torture usually requires proper equipment (whips, knives, thumbscrews, the rack, the iron maiden, red-hot iron bars...), though a skilled torturer can improvise in a pinch. A character may buy a well-equipped torture chamber as a laboratory with a *Torture* Skill that acts as a Complementary to his own Skill.

Interrogation can represent a ceremonial magician's attempts to browbeat and intimidate a reluctant spirit. Priests may need Interrogation as part of exorcisms. Mystic Interrogation, however, uses divine names and magical implements instead of the spotlight in the face and the rubber hose. At the GM's option, a mystic who can only use Interrogation against mystic beings and the like may take the Skill with a -½ Limitation.

Science Fiction

In settings where direct neural implants are commonplace, this Skill might become *Mind Hacking* — the ability to use intrusive computer programs to examine (and perhaps even alter) the subject's memories. Cinematic versions may require the Mind Hacker to enter some sort of virtual reality dreamscape as his consciousness wanders through the subject's brain. Computer Programming and SS: Psychology are Complementary Skills for Mind Hacking.

Settings with advanced knowledge of psychology and hypnosis replace Interrogation with *Brainwashing.* The Science Skills *Neurobiology* and *Psychology* are Complementary. A successful use not only makes the subject tell what he knows, but can implant suggestions and false memories

At the GM's option, either use of Interrogation may be able to implant or alter memories. If so, consider this a Major Transform 2d6, with +1d6 for every 2 points by which the brainwasher makes his roll. Achieving this effect usually takes a lot of time, however (1 Hour or more), and may involve a Skill Versus Skill Contest against the target's EGO Roll.

INVENTOR

Type: Intellect Skill (roll: 9 + (INT/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

This Intellect Skill allows a character to design and construct new devices. It represents that spark of genius, creativity, or perhaps madness that leads to new discoveries.

Unlike most Skills or other *HERO System* elements, Inventor requires "prerequisite" Skills. It doesn't grant a character any scientific or technical knowledge — as noted above, it reflects a "gift" for invention moreso than a learned ability. To use it, a character needs to have a Skill or Skills related to whatever he wants to create — for example, he needs Weaponsmith to invent new weapons, or Electronics and SS: Physics to design a satellite. (These Skills don't function as Complementary Skills; they're requirements, not help.) An inventor may design devices which require several Skills or Knowledges, so long as he has each of those particular Skills. The GM determines which Skills are required for a given invention.

Using Inventor

The rules for Inventor depend on whether the GM wants the campaign (and inventing as an aspect of the campaign) to have a "cinematic" or "realistic" feel.

CINEMATIC INVENTOR

Cinematic inventors can improvise gadgets on the fly, create a superweapon out of odds and ends, and turn simple farm equipment into a cabbage-throwing war machine during a commercial break. Cinematic inventors' Skill Rolls have suffer the standard penalties for performing a task quicker than normal and for equipment, though the GM may choose to reduce the penalties (perhaps significantly) to keep the game flowing along in proper cinematic fashion.

"REALISTIC" INVENTOR

"Realistic" inventors need a lot of time, equipment, and money to create new devices. The Base Time depends on the complexity of the device the character wants to invent, as indicated in the Inventor Base Times table. That table also indicates a general modifier the GM can apply based on the device's complexity; this is in addition to the Active Point penalty described below unless he rules otherwise.

The Active Point cost of a proposed invention provides a guideline for how difficult it is for a character to create. Divide the Active Point cost by 10 and apply the result as a penalty to the Inventor roll. (Gamemasters who want to make inventing harder should increase the penalty to -1 per 5 Active Points; if they want it to be easier, perhaps because a device's Active Points don't accurately reflect its intricacy, decrease it to -1 per 20 Active Points.) When an inventor just wants to improve

an existing device, use only the difference between the original device's *Real* Point cost and the improved version's Real Point cost to determine the penalty. (This means it's easiest to create a bulky, fragile, unreliable prototype and then gradually refine it.) The minimum penalty is always -1 unless the GM rules otherwise, though a complexity bonus may cancel this out. The GM should monitor the inventing process carefully to make sure characters don't abuse the rules, and that using Inventor contributes to the fun of the game.

Example: *Doctor Kelly wants to build a portable laser weapon using modern-day technology. The laser is an RKA 1d6, Armor Piercing (22 Active Points) (which imposes a -2 penalty to her Inventor roll in addition to the GM-assigned penalty of -2 for a Complex device). Like all lasers it has the Beam (-¼) Limitation. Doctor Kelly's prototype has only 4 Charges (-1), and is an OAF Bulky Fragile (-1¾). The total Limitation value is -4, so the final Real Point cost is 5 points.*

Some time later, Dr. Kelly wants to improve the device, making it less bulky and fragile, and giving it more Charges (12). The new laser will cost 9 Real Points, which is 4 points more than the original. That gives Dr. Kelly a -1 penalty to improve the laser, but the GM decides to reduce it to -0.



Having help can be a real boon for the inventor. The Team Skill Use rules (page 22) often apply to tasks involving Inventor, particularly large projects like creating a new aircraft.

Existing Technology And Tech Levels

This process assumes the new invention involves an application of existing technology. Double the penalties for devices that are more advanced than the available technology in the campaign world. If the campaign uses Tech Levels (see Chapter Seven of *Star Hero*), double the penalty for each tech level above the campaign norm.

If a character has an example of a more advanced device that he's trying to duplicate (reverse engineering, so to speak), the GM may want to reduce this penalty substantially — it's easier to copy the wheel than create it from scratch. If the character's seen the more advanced device in operation but doesn't have one to study, the GM might (but doesn't have to) reduce the penalty by 1.

The GM can always rule that some devices are simply impossible to invent during a given time period (or at a given Tech Level) because the inventor doesn't have the right theoretical background. For example, consider an inventor trying to create new superweapons for the American Civil War. The theoretical science behind submarines existed as early as 1860. Thus, a sufficiently large and well-funded program could have built World War I-style submarines half a century early. But aerodynamics wasn't well understood in 1860, so no amount of money could produce a workable airplane.

Gamemasters may wish to rule that some very complex inventions require a number of "sub-inventions" to create — before the hero can invent the liquid-fuelled rocket he has to invent gyroscopic stabilization, high-speed fuel pumps, and cryogenic fuel storage first. A big task like the Manhattan Project or the Apollo Program required thousands of sub-inventions and sub-sub-inventions to accomplish. (Tacitly ignoring these precursors is the easiest way to encourage cinematic lone inventors who try to create marvels in basement workshops.)

Cost

In Heroic games, characters often have to worry about monetary costs. The cost to create an invention depends on the required time and how exotic the materials are. At modern prices, figure $200 per person per day of development work for salaries and associated expenses (adjust for the era). For materials, a modern baseline would be $100 per kilogram for commercially-available items. Exotic materials can cost considerably more — up to millions of dollars per gram for scarce radioactive isotopes or complex hormones (the final price tag is up to the GM). An ordinary, well-stocked workshop costs about $100 per day to operate. Advanced facilities like particle accelerators or chemical refiners can cost $1,000 or more per hour of use. "Throwing money at the problem" can produce better and faster results, while inadequate funding causes major problems (see page 53).

INVENTING IN COMBAT

Typically characters use Inventor out of combat since it takes a long time, requires facilities and tools, and so forth. However, the GM may allow characters with Inventor to modify equipment or gadgets in combat, as long as the modifications are usually fairly minor and are well justified by the character. This takes a minimum Base Time of a Full Phase (and possibly longer); modifiers for using a Skill in combat conditions, lack of proper tools, and the like apply.

Other Rules

EQUIPMENT

Inventor by definition requires equipment — not just the raw parts and supplies needed to create an invention, but the tools to do the creating. Typically a character using Inventor has an entire workshop/laboratory at his disposal, even if it's just a simple one he set up himself in his garage. The GM should apply the lack of equipment penalties strictly.

POWERS AND INVENTOR

Powers generally don't interact with Inventor much. A character whose powers let him manipulate physical objects, such as Telekinesis or some Teleportation-based powers, might be able to use them to reduce the time required for the inventing process — and of course some speedsters can assemble devices in the blink of an eye.

CONSEQUENCES OF FAILURE

Typically a failed Inventor roll means one of two things: either the character can't figure out how to make the device; or the character's attempt fails. In those cases he can try again using the standard rules for that. A bad failure (by 4 or more) has worse consequences — for example, a laboratory accident that hurts the character (or will cause him trouble later), or a GM ruling that for whatever reason the character can *never* invent the device he's trying to create.

BASE TIMES

The Base Time for creating an invention depends on two things: the general complexity of the invention as judged by the GM, and the Active Points in the device. First, consult the Inventor Base Times table for the Base Time Multiplier, which the GM may alter if he sees fit given the circumstances and device in question. Second, divide the Active Points in the device by 10, and multiply the result by the Base Time Multiplier to determine the Base Time for creating the invention. (See *Inventing In Combat,* above, for further rules.)

SUBDIVIDING INVENTOR

Because it's less of a learned Skill than one representing personal insight and intuition, there's no real need or basis for subdividing Inventor. Since characters need "prerequisite" Skills to use it, that imposes a certain amount of "subdivision" on it already.

INVENTOR BY GENRE

Although Inventor has more applications in Modern or Future campaigns, it's quite appropriate for characters in other periods, such as Fantasy. However, the GM should be careful not to let characters make too many wholesale changes to existing technology unless he's willing to change the nature of the campaign. A single invention like the stirrup, the *gastraphetes,* or gunpowder could completely alter the nature of warfare, politics, daily life, and other aspects of the setting.

Fantasy

In Fantasy campaigns featuring gnomish tinkerers, alchemist-engineers, and the like, this Skill may apply in its normal manner. In most Fantasy games Inventor can also function as *Spell Research,* the Skill with which wizards and other spellcasters research and create new spells. The Time required to research a new spell depends on the spell's complexity, as indicated in the Inventor Base Times table. This assumes access to a reasonably complete arcane library; worse/better libraries may add/subtract from the time needed as well as providing Skill Roll bonuses (if bought as "laboratories").

At the end of the time period, the character makes a Spell Research roll at a penalty of -1 per 10 Active Points in the spell (again, the quality and contents of the library may modify this penalty). If the roll succeeds, the character has created a new spell, which he must pay for according to the standard rules of the campaign. If it fails, he has not yet found or created the spell and can try again using the standard rules for that. If it fails badly (by 4 or more), he's created the spell incorrectly, with potentially disastrous consequences to himself that won't become apparent until he tries to use it.

Modifying an existing spell (say, to add an Advantage, remove a Limitation, or increase the dice of effect) is easier than creating one from scratch. Use the rules described above.

See Chapter Four of *Fantasy Hero* for more information on magic and creating spells.

INVENTOR BASE TIMES

Category Of Invention	Base Time Multiplier	Modifier
Very Simple	1 Hour	+2
Simple	6 Hours	+1
Average	1 Day	+0
Complex	1 Week	-2
Very Complex	1 Month	-4

The Base Time Multiplier indicates the amount of time multiplied by the Active Points in the device divided by 10.

KNOWLEDGE SKILL

Type: Background Skill (roll: see text)
Cost: 2 Character Points for a base 11- roll, convert KS to an INT-Based Skill for +2 Character Point (total of 3 Character Points), +1 to the roll per +1 Character Point

This very general and flexible Background Skill represents knowledge of certain groups, places, people, or things — in short, any subject a character wishes to have knowledge of. The character must define the subject when he purchases the Skill. Knowledge Skills are one of the most intriguing and useful aspects of the *HERO System*'s Skill rules. With them, a character can define what he knows with a great deal of precision, making it easy to create characters who are experts in many subjects.

Spending 2 Character Points on a Knowledge Skill (KS) gives the character an 11- roll to know a fact about the subject. Alternatively, a character can make a KS and INT-Based Roll for 3 Character Points, giving a base (9 + (INT/5)) roll. In either case, each +1 to the Skill Roll costs +1 Character Point. (If the character's INT is so low that his INT Roll is 10- or lower, he still gets an 11- roll with a KS for 2 Character Points, and the third and further points simply increase the roll at the normal +1 for 1 point rate.)

When buying any KS, think about a character's background and the sort of things he'd learn or need to know to have that background. Usually, a character's KSs help explain how he learned other Skills. You might also want to think of other Background Skills (PSs and SSs) the character might know, and how they all interrelate (see page 62).

Types Of Knowledge Skills

Generally speaking, you can group Knowledge Skills into four types: Groups, People, Places, and Things.

KNOWLEDGE SKILL — GROUPS

This type of KS represents knowledge of different organizations or cultures, like KS: Confederation Of Planets, KS: The Espionage World, or KS: Boston Police Department. This gives the character thorough knowledge of a culture or organization, including such things as its structure, members, duties, customs, taboos, requirements, and protocols.

In some instances, a KS of a group is referred to as a *Culture KS,* or CuK, which qualifies it for point savings if the character also has the *Traveler* Skill Enhancer. What constitutes a CuK is up to the GM, but usually it should be fairly obvious from the name of the Skill: KS: The Zulus, KS: Arabic Culture, KS: Asian Culture, and so on. The "Subculture KSs" discussed below also qualify as CuKs; they just focus on a much "smaller," more specific culture.

Subculture Knowledge Skills

One popular type of Group KS is known as a *Subculture Knowledge Skill.* Examples include The Espionage World, The Martial World, The Superhuman World, The Mystic World, The Law Enforcement World, The Military/Mercenary/Terrorist World, and the like. A Subculture KS is similar to the *Streetwise* Skill, but deals only with the world of that subculture. Streetwise doesn't do much good among martial artists, mystics, or the like, because those who belong to such a subculture are rather insular and closed-mouthed about it when talking to outsiders.

A successful Subculture KS roll allows a hero to know about the subculture, including its practices and practitioners, places where members of the subculture congregate, the subculture's bodies of lore, who's on top in any competitions unique to the subculture, current affairs among members of the subculture, and so forth. Additionally, he can use the subculture's grapevine to hear about unusual events and happenings in that subculture, and to send messages to other people in that subculture. For example, if a hero hears an assassin used an interesting but little-known Taijutsu technique to kill a politician, a successful KS: The Martial World roll might let him figure out who can reveal the culprit's identity to him (or, simply, who the culprit is).

A Subculture Knowledge can act as a Complementary Skill to Disguise or Bureaucratics rolls related to that subculture. However, based on the character's origin, his knowledge of some aspects of a subculture may be limited, imposing penalties on the roll. For example, a character with KS: Law Enforcement World based on his former job as a New York cop might know very little about how policemen in the United Kingdom act.

KNOWLEDGE SKILL — PEOPLE

This type of KS represents knowledge of a type of person, or even a single person. For instance, a character could have KS: Spellcasters, KS: Wizards, KS: Necromancers, or KS: Karna Doom the Dark Necromancer. This form of KS tells the character about individuals in the group and (more generally) how such people react to specific situations (like being asked questions or offered money).

KNOWLEDGE SKILL — PLACES (AREA KNOWLEDGE, CITY KNOWLEDGE)

This type of KS represents a thorough knowledge of an area, ranging from an individual street in a city to an entire continent or planet. For large areas, this KS gives a character knowledge of the area's geography, major cities, politics, economy, and so forth. Relevant and accurate maps, travel guides, and the like often provide bonuses.

Applying this Skill to a city gives the character thorough knowledge of a city's layout, streets, transportation terminals, meeting places, taverns, fine restaurants, shortcuts, criminal areas, and important residents. An Area Knowledge (AK) only provides general information about a city (where it is, how big it is, the major districts), City Knowledge (CK) gives very specific information. CKs help during car chases and can cut down travel time within the city (reduce travel

time by 10% for a successful roll, +10% for each additional point the character succeeds by, to a maximum of 50% reduction).

Characters can also learn AKs of various terrain types (such as Plains, Forest, Desert, Caves, or Mountains), which may be Complementary Skills for Survival, Tracking, and similar Skills. This could also include strange alien environments, such as planets with extremely high gravity or atmospheres of chlorine gas. The Skill could be very specific (AK: Luray Caverns) or very general (AK: Underground Caverns).

KNOWLEDGE SKILL — THINGS

This type of KS represents knowledge of anything that doesn't fall into one of the other categories (but not including sciences; see *Science Skill,* page 258). Examples include Alien Statues, Trees, Superhumans, History, Art History, Video Games, Philosophy, Religion, Skateboards, Horses, Thoroughbred Horses, Politics, Secret Societies, and Tax Evasion. The possibilities are infinite; talk to the GM about exactly what KSs would be most appropriate for a character.

Specificity Of Knowledge Skills

Characters define how specific their KSs are. The more general the KS, the less the character knows about specific aspects of the subject. For example, a character with KS: African Cultures has a wide overview of that subject — he knows a lot of general information about Africans and could roughly describe them, but wouldn't necessarily know a lot of details. If he'd chosen a KS of one particular African culture (such as KS: Zulu Culture), he'd know many details about that one culture, but not much about other African cultures. KS: African Culture gives him general information about Zulu culture, but not much more unless he succeeds with his Skill Roll by a large margin; even then he knows less information than he would with KS: Zulu Culture.

Even with a specialized Knowledge Skill, some facts are more obscure than others. The GM should apply appropriate modifiers for difficulty based upon the obscurity or rarity of the information the character needs to know. For example, a character with KS: Zulu Culture could probably make an unmodified roll to know the major Zulu holidays or festivals. But knowledge of the secret rituals of ancient Zulu sorcerers might require him to make the roll at a significant penalty — -3 at least, and perhaps -5 or more.

KNOWLEDGE SKILL CATEGORIES

The breadth and flexibility of KSs may create difficulties for the GM — it's not always easy to determine how common (or obscure) a particular fact is, and thus how likely (or unlikely) it is for a PC to know that fact based on the nature of the KS he wants to use. The following optional rule helps to resolve this difficulty. It divides all Knowledge Skills into thirteen categories indicated in the accompanying table. The categories rank the magnitudes of knowledge a KS provides. As the terms on the table indicate, the "typical" KS is an Average one, focusing on a reasonably limited body of information but still covering its subject well. The player, together with the GM, determines what category each of his character's KSes belong to.

To use this system, the player and GM should decide which category a KS falls into when the character buys it. When the character wants to determine if he knows something, the GM decides what category the fact he wants to know belongs to. For each step up or down the list, the character suffers a -5 penalty to know the fact. The GM may increase or decrease this penalty for facts he feels are particularly noteworthy or obscure, or if it's dramatically appropriate (or inappropriate) for the character to know.

Example: *Andarra has the Knowledge Skill Galactic History. While investigating a mystery, she needs to know a particular fact from the history of a specific nation on a world in the Milky Way Galaxy. Since Galactic History is an Incredibly Broad subject, and the history of a nation is a Precise subject (a difference of five steps on the Knowledge Skill Categories Table), she suffers a -25 penalty for trying to remember the fact.*

Due to the stiff penalties imposed by this system (greater even than Extraordinary Skill Roll penalties in many cases), it's difficult for charac-

KNOWLEDGE SKILL CATEGORIES TABLE

Category	Area/Subject Covered
Unimaginably Broad	Interdimensional
Extraordinarily Broad	Intergalactic/Universal/Dimensional
Incredibly Broad	Galactic/Interstellar
Extremely Broad	Star sector
Very Broad	Solar system
Broad	Planet or world
Average	Continent (or like region)
Precise	Nation, some large races/peoples/tribes
Very Precise	Province, city, most races/peoples/tribes
Extremely Precise	Specific region, specific racial or tribal group, specific family
Incredibly Precise	Specific neighborhood, specific subject relating to a specific group
Extraordinarily Precise	Specific person
Unimaginably Precise	Specific subject about a specific person

BROAD KNOWLEDGE SKILL CATEGORIES

Unimaginably Broad	Extraordinarily Broad	Incredibly Broad	Extremely Broad
Interdimensional	Intergalactic/Universal/Dimensional	Galactic/Interstellar	Star sector
Interdimensional Cultures	Intergalactic Cultures	Milky Way Galaxy Cultures	Earth Sector Cultures
Interdimensional History	Intergalactic History	Milky Way Galaxy History	Earth Sector History
Interdimensional Literature	Intergalactic Literature	Milky Way Galaxy Literature	Earth Sector Literature
Interdimensional Superhumans	Intergalactic Superhumans	Milky Way Galaxy Superhu-mans	Earth Sector Superhumans

AVERAGE KNOWLEDGE SKILL CATEGORIES

Very Broad	Broad	Average	Precise	Very Precise
Solar system	Planet or world	Continent (or like region)	Nation	Province, city, race, people, tribe
Sol System Cultures	Earth Cultures	African Cultures	Nigerian Culture	Yoruba Culture
		European Cultures	French Culture	Gascon Culture
		Asian Cultures	Chinese Culture	Hakka Chinese Culture
		The Martial World		
		Earth Art History		
Sol System History	Earth History	European History	British History	History of London
	Turakian Age History	Westlands History	Mhendarian Palatinate History	History of the River District
				History of Mhendarian Nobility
				History of Mhendarian Palatinate 1200-1600
Sol System Literature	Earth Literature	European Literature	British Literature	London Literature
			Jewish Literature	British Jewish Literature
Sol System Superhumans	Earth Superhumans	North American Superhumans	Superhumans of the USA	Vibora Bay Superhumans
		Superheroes	VIPER	VIPER in Europe
		Supervillains		

PRECISE KNOWLEDGE SKILL CATEGORIES

Extremely Precise	Incredibly Precise	Extraordinarily Precise	Unimaginably Precise
Specific region, specific racial or tribal group, specific family	Specific neighborhood, specific subject relating to a specific group	Specific person	Specific subject about a specific person
Black River Yoruba Culture	Black River Yoruba Medical Culture	Fulani Okonkwo	Okonkwo's Medical Practices
House de Gascon Culture	De Gascon Military Culture	Valerie de Gascon	de Gascon's Military Tactics
Wing Chu Culture	Wing Chu Art History	Wing Chu Xian	Wing Chu Xian's Artwork
History Of London Nobility	History of the House of Wellington	Lord Wellington	The Battle of Waterloo
History of House Betarra	Betarran Military History	History of Janak Betarra	History of Janak Betarra's Battles
History of the Scarlet Hills Orcs	Scarlet Hills Orcs Treaties History	History of Twelve Deers, Scarlet Hills Orc shaman	History of Twelve Deer's study of Shamanism
London Jewish Literature	London Poetry	Charles Dickens	*David Copperfield*
	Jewish Medical Literature	Moorish Jews' Medical Literature	
Millennium City Superheroes	The Champions	Defender	Defender's Defensive Technology
VIPER In France	VIPER In Paris	VIPER Nest Leader In Paris	VIPER Nest Leader's Hobbies



ters to know facts too far removed from their core knowledge base unless they have extremely high rolls (or access to a library, computer database, or other collection of information defined with a high KS roll). Gamemasters may want to significantly reduce the penalties in campaigns with a more "cinematic" feel, such as many Space Opera and High Fantasy games.

Other Rules

EQUIPMENT

Knowledge Skills do not involve or require any equipment; they're purely personal Skills. However, characters with KSs often take advantage of libraries, databases, reference books, maps, and similar sources of information to improve their chances of knowing a particular fact. (In fact, the large penalties for knowing obscure facts often make reference materials mandatory.) See page 371 for rules and information regarding the optional *Research* Skill.

CONSEQUENCES OF FAILURE

In most cases, a failed KS roll simply means the character doesn't know the answer to a particular question, can't remember a specific fact, or the like. A badly failed roll (by 4 or more) may mean he *thinks* he knows the answer, but is incorrect (this may have embarrassing or dangerous consequences for him, or simply be inconvenient).

BASE TIMES

Remembering a fact or answering a question usually requires a Full Phase (possibly less). Researching a fact or subject requires a minimum Base Time of 20 Minutes per step up or down from "Average" on the Knowledge Skill Categories Table (for example, researching an "Extremely Broad" fact requires a minimum Base Time of 1 Hour, an "Extraordinarily Precise" fact takes 1 Hour, 40 Minutes). The GM can adjust this Base Time up or down as he sees fit depending on the obscurity of the fact and other factors; the optional new *Research* Skill (page 371) may reduce the time required.

UNIFYING KNOWLEDGE SKILL

Knowledge Skill is such a broad Skill that it generally shouldn't be "unified"; that would spoil its usefulness and flavor. If you're interested in suggestions for making it easier for characters to buy lots of KSs cheaply, see the optional rules in the *Skill Enhancers* section in Chapter One.

KNOWLEDGE SKILLS BY GENRE

Knowledge Skills work the same in all genres. Genre books published by Hero Games often include lists of common or especially relevant/useful KSs for a given genre.

LANGUAGE

Type: Background Skill (roll: N/A)
Cost: 1-5 Character Points (see Fluency Table)

This Background Skill represents a level of fluency in, and knowledge of, a language.

Every character knows his native language for free (at the 4-point level as described in the Fluency Table; see below about splitting these points among two or more Languages). Learning other languages costs Character Points. The Fluency Table indicates the point cost of each level of fluency in a language.

FLUENCY TABLE

Fluency	Character Points
Basic Words	½ (see text)
Basic Conversation	1
Fluent Conversation	2
Completely Fluent, with accent	3
Idiomatic, native accent	4
Imitate dialects	5
Literacy (if not standard for society)	+1 point (see text)

LEVELS OF FLUENCY

At the GM's option, a character can buy knowledge of *Basic Words* in a language — no more than a few dozen words, usually common ones — for ½ Character Point. (Since the minimum cost of anything is 1 Character Point, this is only relevant if the character buys two, four, or some other even number of languages at the Basic Words level; otherwise the odd one gets rounded up to a cost of 1 Character Point.) Buying knowledge of Basic Words in a language does not grant access to the Language Familiarity Table if it's used in the campaign; the character doesn't know enough of the language to derive any knowledge of related languages.

At the *Basic Conversation* level of fluency, a character can conduct simple conversations. He knows few (if any) complex or technical words, but he can talk about the weather, current events, his latest activities, and so on.

At the *Fluent Conversation* level of fluency, a character can conduct just about any type of conversation, including ones related to obscure or complex subjects. However, he may not know rare or technical words and still may have difficulty understanding speech that's spoken too quickly, contains too many slang or contracted words, or the like.

At the *Completely Fluent* level of fluency, a character knows the language thoroughly, including rare, technical, and slang terms... but he still speaks with an accent. At the *Idiomatic* level, the accent disappears, but he isn't necessarily fully conversant with unusual dialects or the like — that requires the *Imitate Dialects* level of fluency.

LANGUAGE BASICS

A Language allows a character both to speak that language in ways other speakers can understand and to understand what other speakers say to him. (See below regarding literacy.) A character without complete command of a language (*i.e.,* who knows it at less than the 5-point level) may sometimes have to make an INT Roll to understand phrases that are very rapid, slurred, or in obscure or strange accents or dialects, or to speak or undersand phrases featuring unusual, obscure, or obsolete words. A character who has 2 or more Character Points' fluency in a language is qualified for a job as an interpreter between it and any other language he knows at the same (or greater) level, though most professional interpreters have at least 3 Character Points' fluency (if not more).

Knowing a language may grant a character some basic knowledge of the culture and lifestyle of the people who speak that language. The structure of the tongue, the commonality of words within it, and the emphasis it places on certain subjects may confer insight into the minds of the speakers (though not nearly as much as a Cultural Knowledge Skill would). Similarly, it might grant some basic geographical knowledge of the country where the language is spoken, and so on. This may depend on where and how the character learned the language. For example, classroom instruction in German is more likely to give the character a little knowledge of German culture and geography than learning German by spending a lot of time with a native German speaker who's in the character's Space Marines brigade.

LINGUISTIC COMPLEXITY

The Fluency Table assumes all languages are of roughly the same complexity. For campaigns desiring greater "realism," you can rank Languages based on their complexity, and vary the cost accordingly. The accompanying Language Complexity Table provides suggested guidelines for such a system, but the GM may change it if he sees fit.

Using this system, a *Very Simple* Language has so few words, such simple structure, or is so easily learned that even a single point buys a character more than just Basic Conversation knowledge with them. (Or, to put it another way, perhaps "Basic Conversation" is the highest level of communication characters can use so simple a language for.) Few regularly-spoken languages qualify for this level, but it's appropriate for many argots, systems of slang, and other primitive, simple, or restricted-use languages. A thieves' cant in a Fantasy setting, cockney rhyming slang, modern American urban gang slang, or a battle-language created by an elite military unit might all count as Very Simply Languages. *Simple* Languages are similar, but slightly more complex or broader in scope (such as a well-developed battle code or body of slang).

Average Languages include the vast majority of Languages, such as French, German, Spanish, Swahili, or Thai. *Complex* Languages are those languages which, due to their breadth, structure, number of words, alphabet, frequency of irregular word forms, or other factors are difficult for non-native speakers to learn. This would include Arabic, English (the largest vocabulary of any Human language, multiple irregular word forms), Finnish (long compound words, 15 noun cases),

HUMAN LANGUAGES

No one knows exactly how many languages humans have created and spoken throughout their history. Estimates for the number of languages range from 30,000 to as many as 500,000.

As of the late twentieth/early twenty-first century, scholars estimate that from about 3,000 to about 10,000 languages are spoken on Earth. Most experts have settled on a figure of 6,000 languages, but many are spoken only by small populations: approximately one-fourth of these languages are spoken by less than 1,000 people, and half have fewer than 10,000 speakers.

As of 2006, the most commonly spoken languages in terms of number of native speakers are, in order: Mandarin Chinese; Hindi; Spanish; English; Arabic; Portuguese; Bengali; Russian; Japanese; and German. (Some estimates put Punjabi ahead of German by a few million speakers, and scholars often disagree regarding exactly how many speakers a given language has.) If one includes second-language speakers, English becomes the world's dominant language, with over 1.2 billion speakers by some estimates.

BRAILLE, SIGN LANGUAGE, AND MORSE CODE

Humans have invented many different ways to communicate other than speaking and writing. Some of these include Braille (which allows blind people to read), various forms of sign language (which allow deaf people to "talk"), semaphore, and Morse Code (for use with telegraphs).

Characters who want to know one of these "languages" simply have to pay 1 Character Point for an appropriate form of Literacy (such as Literacy (Braille) or Literacy (American Sign Language)). They can then use that Literacy with any Languages they know that use the same alphabet for which he learned the Literacy. For example, suppose a character has English as his native Language and can also speak French and Finnish. He learns American Sign Language, which uses the Latin alphabet. He can use ASL to "sign" words in any of his three Languages, since they all use the Latin alphabet. But he couldn't use ASL to sign words in Russian or Greek, even if he knew them, because they use different alphabets (he might be able to use ASL to sign Russian or Greek words phonetically, however). But he could spend another point to learn a form of sign language compatible with Russian and its Cyrillic alphabet if he wanted to.

Some sign languages, such as the one used by the Plains Indians in the nineteenth century, are actual gesture-based languages used as a form of communication by two people who don't share a common spoken language. These sign languages are bought as normal Languages, not as a form of Literacy.

LANGUAGE COMPLEXITY TABLE

Fluency	Very Simple	Simple	Average	Complex	Very Complex
Basic Words	—	—	½	1	2
Basic Conversation	—	—	1	2	3
Fluent Conversation	—	1	2	3	4
Completely Fluent, with accent	1	2	3	4	5
Idiomatic, native accent	2	3	4	5	6
Imitate dialects	3	4	5	6	7

Hungarian (complex vocabulary and grammar), Japanese, and Russian (long compound words, odd consonant clusters, multiple cases/verb aspects/genders, unpredictable stress). *Very Complex* languages, such as Mandarin and most other forms of Chinese, are even more difficult to learn and speak due to their structure, use of multiple pronunciation schemes, or other factors. The GM decides which category a given Language falls into, using Average as the default.

This system has no effect on a character's native Language received as an Everyman Skill — regardless of the cost listed, the character receives an "Idiomatic, native accent" level of fluency in his native tongue.

LITERACY

Most (though not all) languages have a written form. In campaigns where literacy is common (such as virtually all modern-day and *Star Hero* games), characters receive Literacy with every language they know for free.

In campaigns where literacy is unusual (like most Fantasy settings), characters must spend +1 Character Point for Literacy with a given language. This includes the native Language he receives for free as an Everyman Skill; Literacy with the native Language isn't free in campaigns where Literacy isn't standard. Thus, if a character knows four languages (his native tongue plus three he's paid points for) and wants to be able to write them all, he must spend 4 Character Points. At the GM's option, a character can simply spend a flat 1 Character Point for Literacy with all the languages he knows; this is a good rule for campaigns where characters need to know lots of languages but aren't built on a lot of Character Points.

Alternately, the GM might charge for Literacy at the rate of 1 Character Point *per alphabet.* Thus, a character who pays 1 point to read English (which uses the Latin alphabet) could read any other language written in the Latin alphabet (though of course he couldn't understand what he was reading unless he also knew the language being read).

In campaigns where characters must pay for Literacy, characters with the *Linguist* Skill Enhancer cannot get Literacy with their native Language for free; it costs 1 Character Point (the minimum cost of anything). Nor does Literacy affect how well a character knows other languages using the Language Familiarity Table (see below).

Literacy Complexity

Some languages have multiple written forms. For example, Ancient Egyptian can be written in the complex hieroglyphics, the hieratic cursive script derived from them, or the simpler demotic; Japanese has three different writing forms (kanji, kana, and Latin alphabet). Languages with ideogrammatic writing systems, such as Chinese, are also extremely complex and difficult to learn.

Therefore, the GM may wish to consider expanding the cost for Literacy based on complexity. Most Languages are relatively easy to write and only cost 1 Character Point for Literacy. This would include virtually all alphabetic languages, such as English (and other languages written with the Latin alphabet), Swedish, Russian, and Greek. Languages with more complex writing systems — such as the ones described above — would cost 2 Character Points (or even more) for Literacy. If a language has multiple written forms, typically buying Literacy once allows a character to use any of them, but the GM may charge 1 Character Point (or more) per form of writing if desired.

Languages Without Spoken Form

Some languages have no spoken form — or, more accurately, modern humans don't know how they were spoken since they died out long ago. Examples include Ancient Egyptian, Sanskrit, and Sumerian. Characters buying these languages must pay the standard cost for them. They can still speak them, it's just that they can't guarantee that their pronunciation matches that of the true speakers of the tongue. This may also cause problems if two characters try to communicate in the same written-only language but have different opinions on how to pronounce words, or in a time-travel campaign where the heroes' mispronunciation of words will cause them difficulties until they learn to speak better.

LANGUAGES AND ANIMALS

Many animals have ways to communicate with other members of their species; this is represented by the Everycreature *Language* Skill noted on page 44. Other animals learn to communicate in more advanced ways. For example, they may learn a 1-point Language, *Hand Signs,* to understand the hand signals and gestures their master uses to give them commands. More intelligent animals, including many bought as Followers, may have ½ or 1 Character Point (no more) in a human language, such as English or French. This allows them to understand spoken commands or statements from their master (or anyone else, for that matter), but not to speak back (even if they can mimic human speech).

In some *Fantasy Hero* games, animals can speak with each other, and sometimes humans, quite clearly. If this applies in your campaign, each animal may have its own language (Porcupine, Dragon, Bluebird, Rabbit), a language based on animal type (Mammalian, Avian, Draconic, Feline), and/or even normal languages spoken by sentient races. You could even create an "Animal Language Familiarity Chart" showing the relationships among various animal languages.

The Language Familiarity Table

It's been known for centuries that some languages relate closely to other languages... and are completely unrelated to other tongues. For additional "realism," you can represent this in *HERO System* terms with the optional Language Familiarity Table beginning on page 217. If the GM chooses to allow use of the Chart in his campaign, a Language's cost depends on how closely it relates to languages the character already knows.

Languages enclosed by a *thin box with rounded corners* have 4 points of similarity. These Languages are so similar that they overlap — a character with points in one of them has half those points in all other Languages in that group, up to a maximum of 3 points (halves round down). For instance, a character with 4 points of German has, effectively, 2 points of Yiddish, Plattdeutsch, and Luxembourgian.

Languages enclosed by a *thick box with rounded corners* have 3 points of similarity. Characters with 2 or more Character Points in any Language in that group may make an INT Roll to understand phrases in other languages in that group. The GM may modify the roll based on the length of the speech, how well the character hears the speech, the complexity of the words and phrases used, and similar factors. Also, other Languages in that group cost -1 Character Point to learn (the minimum 1-point investment gets the character 2 points of effectiveness in the Language). Roughly speaking, a thick, rounded box represents a branch of a linguistic subgroup within a language family, such as the Finnic and Ugric branches of the Finno-Ugric subgroup of the Uralic And Altaic family.

Languages enclosed by a *thin box with square corners* have 2 points of similarity; characters may learn any other Languages in such boxes at -1 Character Point cost. Roughly speaking, a thin, squared box represents a language subgroup, such as the Finno-Ugric subgroup of the Uralic And Altaic family.

Languages enclosed by a *thick box with square corners* have 1-point of similarity; there is no cost benefit or penalty for learning these Languages. Roughly speaking, a thick, squared box represents a language family, such as Indo-European, Uralic And Altaic, Hamito-Semitic, or Sino-Tibetan. (This comparison breaks down slightly with the vast and intensely-studied Indo-European family, which in game terms has several other "family" boxes within its "superfamily" box.)

At the GM's option, Languages outside the thick box with square corners where the character's native language is located cost +1 Character Point (one additional point) — Basic Conversation costs 2 Character Points, Fluent Conversation costs 3 Character Points, and so on. After buying his first Language in a given thick-square box, a character can learn other Languages in that same thick-square box using the standard rules. (In some *Star Hero* games, the alienness of a Language may also increase its cost; see below.)

Example: *Fast Eddie knows English as his native language; he has it at the 4-point level. He can make INT Rolls to understand people speaking in Anglo-Saxon, Frisian, Afrikaans, Dutch, Flemish, German, Yiddish, Plattdeutsch, or Luxembourgian. The length of the speech, how well he heard the speaker, and other factors modify this INT Roll. Eddie may learn German without too much trouble: for a 3 Character Point cost he could have 4 points of German. This automatically gives Eddie the ability to speak Yiddish, Plattdeutsch, and Luxembourgian at the 2-point level.*

Eddie also learns Fluent Conversation in Mandarin Chinese. Since Mandarin has no similarity to English and the GM's using the optional rule, it costs him 3 Character Points to earn 2 points' worth of fluency in Mandarin. Now, however, Eddie can learn Cantonese for -1 Character Point cost, since he knows another language in that group.

On the Language Familiarity Table, Languages marked with an asterisk (*) are extinct — they're no longer spoken by anyone on an everyday basis, or at best are spoken by a tiny, restricted group for limited purposes. At the GM's option, such Languages cost +1 Character Point (one additional point).

LANGUAGE FAMILIARITY TABLE RULES

If a campaign uses the Language Familiarity Table, its effects are cumulative with the *Linguist* Skill Enhancer. For example, a character who has Danish as a native Language (4 points' worth) and Linguist has 3 Character Points' worth of Swedish and Norwegian for free, instead of the normal 2 points, because the Skill Enhancer effectively gives him another point in each of those languages for free. The GM may change this rule if appropriate for the campaign or a particular situation.

TRANSLATION ONLY

Sometimes a character doesn't want to be able to speak a language, but wants to be skilled at translating languages with the help of reference texts, his own intuition, and the like. Instead of buying Languages, a character like this should buy Cryptography with the *Translation Only* Limitation (see page 164).

LANGUAGE FAMILIARITY TABLE QUICK-REFERENCE TABLE

Type Of Box	Degree Of Familiarity
Thin Line, Rounded Corners	4 points of similarity; character has half the points he has in one Language in this group with all other Languages in that group
Thick Line, Rounded Corners	3 points of similarity; may make INT Roll to understand phrases in other Languages; other Languages cost -1 Character Point to learn
Thin Line, Square Corners	2 points of similarity; other Languages cost -1 Character Point to learn
Thick Line, Square Corners	1 point of similarity; no benefit

If a character buys multiple languages that can reduce the cost of a single other Language via the Language Familiarity Table, he does *not* get all the cost reductions. A character can only get one cost reduction per Language, though he may take the most advantageous reduction available based on all the Languages he knows.

As noted in the example above, a character's native Language (which he gets for free) reduces the cost of Languages he pays points for when using the Language Familiarity Table. It can even give him other Languages for free.

In campaigns where characters must pay for Literacy, the cost of Literacy *does not* affect how many points a character receives in other Languages for free via the Language Familiarity Table. For example, if a character buys Dutch (completely fluent, Literacy) for a total cost of 3 + 1 = 4 Character Points, he receives only 1 point of Afrikaans for free (half of 3, rounded down, rather than half of 4).

EARLIER VERSIONS OF LANGUAGES

For the sake of simplicity and to save space, the Language Familiarity Table generally does not list "earlier" or "simpler" versions of most modern languages. For example, the Table includes English (and even Anglo-Saxon) but not Middle English. Depending on the GM's judgment as to the relationship between modern and earlier forms of a language, characters should be considered to have 2-4 points of familiarity with "earlier" versions of any Language they can speak.

Language As An Intellect Skill

Languages have an unusual cost structure, different from any other Skill in the *HERO System.* For the sake of consistency, GMs may wish to convert Languages into an Intellect Skill costing 3 Character Points for the standard (9 + (INT/5)) roll. The accompanying table lists the roll that matches various degrees of fluency. Converting Languages into an Intellect Skill does not prevent you from using the Language Familiarity Table.

If the GM uses this system, you can apply standard Skill Modifiers to Language rolls, representing such factors as the thickness of a speaker's accent, how long he speaks, ambient noise, complex phrasing, the use of technical vocabulary, and similar factors. In most cases, characters won't have to make any sort of roll to speak normally. But if a roll is necessary, then even a character with just an 8- or 11- gets a +3 to +5 bonus for "routine" speech, making the roll a virtual certainty in most situations. Similarly, with the GM's permission a character could make Language rolls as Complementary Skill Rolls when using Skills like Conversation, Oratory, and Persuasion — if the roll succeeds, he's chosen "just the right word" or made the right turn of phrase.

Even if the GM keeps the standard cost structure for Languages, you can use the rolls indicated in the accompanying table in situations when characters need to make rolls to use their Languages or understand a speaker.

LANGUAGE AS INTELLECT SKILL

Level Of Fluency	Roll	Cost
Basic Words	6-*	½ (no Skill Levels apply)
Basic Conversation	8-	1 (no Skill Levels apply)
Fluent Conversation	11-	2 (no Skill Levels apply)
Completely Fluent, with accent	12-	3 (INT Roll)
Idiomatic, native accent	14-	Varies
Imitate dialects	16-	Varies

*: If the GM uses this system, the Untrained Skill Use rules do not apply to Languages.

Other Language Rules

EQUIPMENT

Languages do not involve or require any equipment; knowing one is a purely personal Skill. But some genres, such as Fantasy and Science Fiction, may feature devices that can automatically translate a character's speech into another language and allow him to understand responses (crude versions of such technology are available in the modern day).

POWERS AND LANGUAGES

As noted on page 231 of *The HERO System 5th Edition, Revised,* Telepathy doesn't depend on language. It transcends linguistic barriers, allowing two persons who don't speak the same language to communicate easily. This also applies to Mind Link and the *Telepathic* Advantage for Mind Control.

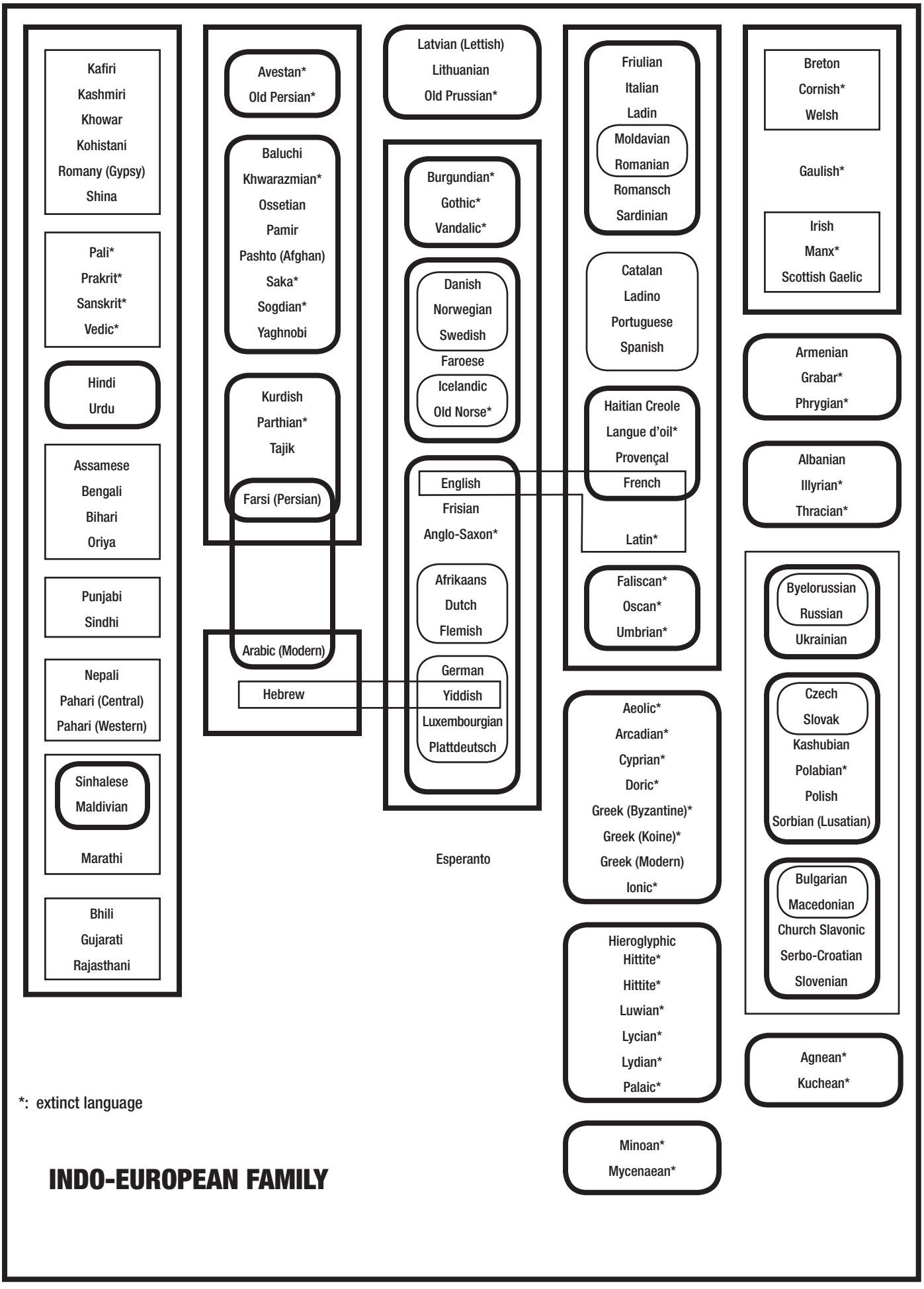
Because Summon requires a character to give commands and instructions to the beings he Summons (or at least negotiate with them for services), it assumes the character has the means to communicate instructions to the Sumonee via speech and make himself understood. Typically this means the Power temporarily grants the Summonee the ability to understand the character's speech (and respond in simple terms), but this may depend on the special effects of the power and other circumstances. In any event, Summon does *not* grant a character any Languages for general use for free.

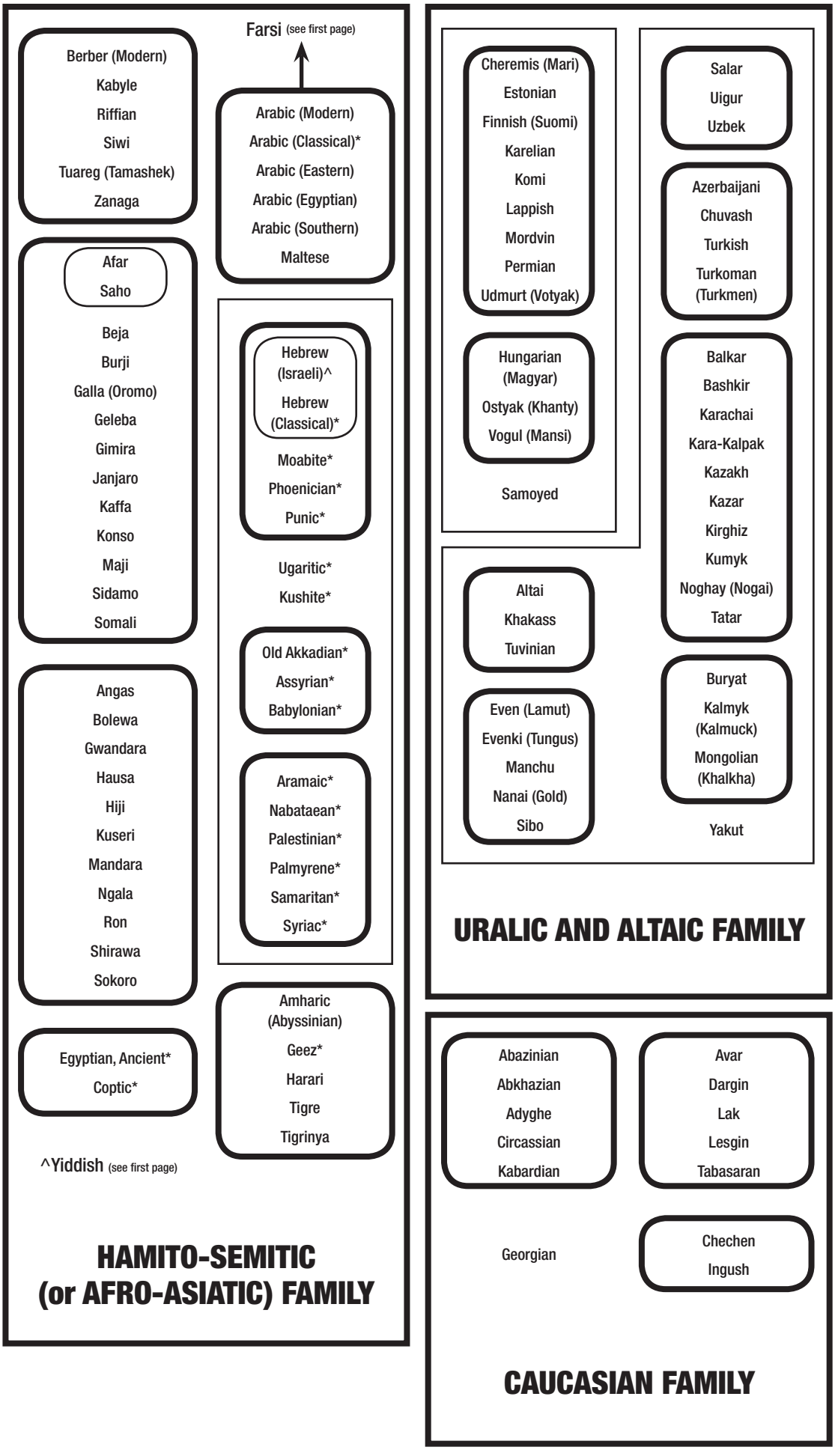
BASE TIMES

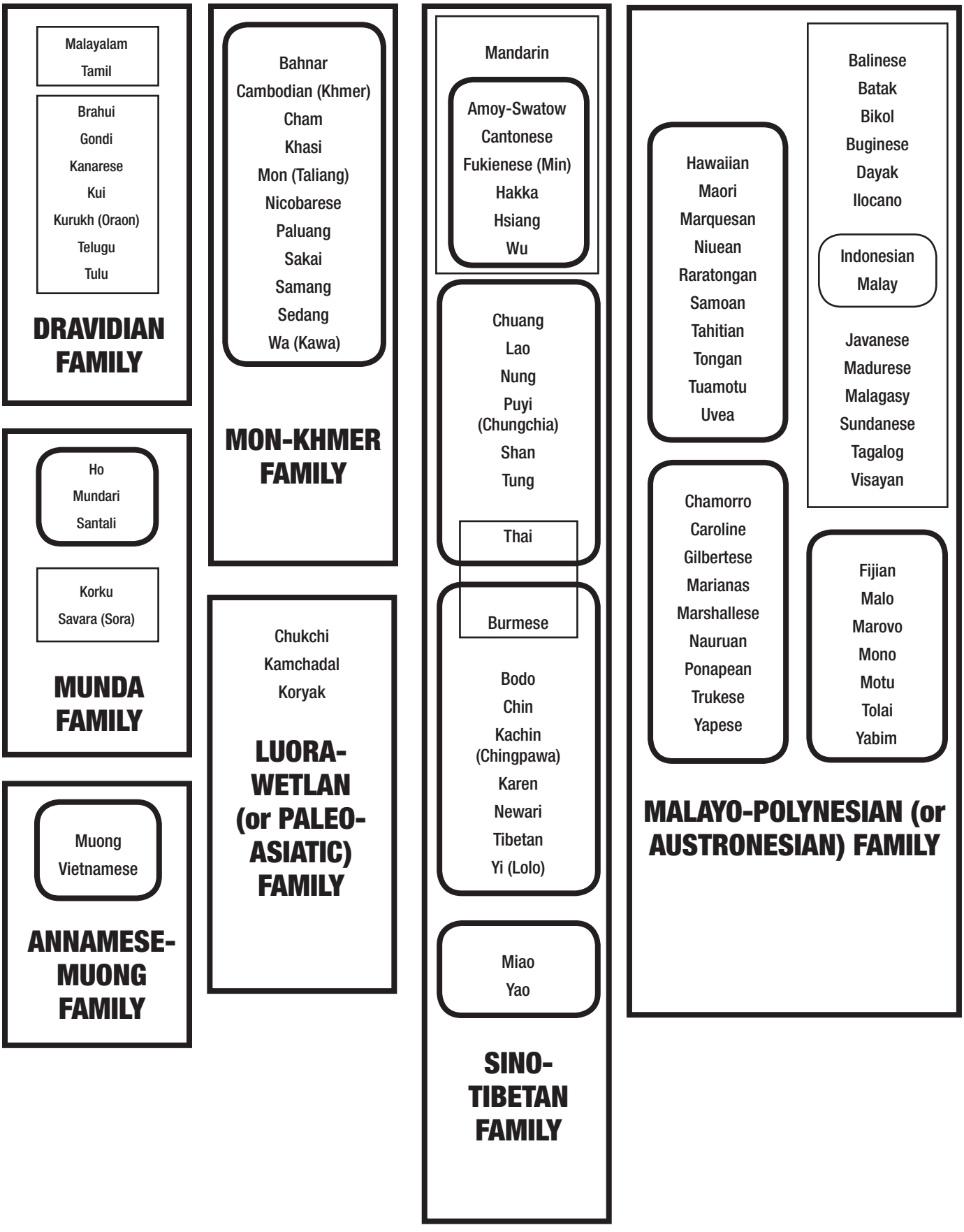
The Base Time needed for speaking or listening depends on the length of the speech, though in-game soliloquies are usually considered as Actions that take no time (since, dramatically speaking, in novels, movies, and comic books the action "pauses" when someone says something important). At a minimum, a conversation between two characters usually takes a Full Phase.

UNIFYING LANGUAGE

Language is about as subdivided as a Skill can get already. For games where GMs don't want to worry about characters' ability to communicate, they might be allowed to buy Languages by larger groups — linguistic branches or subgroups. For example, for 2 Character Points a character might buy fluent conversation in Germanic Languages (English, German, Dutch, Swedish, Danish, and the other languages in their thick-square box on


Kafiri
Kashmiri
Khowar
Kohistani
Romany (Gypsy)
Shina
Pali*
Prakrit*
Sanskrit*
Vedic*
Hindi
Urdu
Assamese
Bengali
Bihari
Oriya
Punjabi
Sindhi
Nepali
Pahari (Central)
Pahari (Western)
Sinhalese
Maldivian
Marathi
Bhili
Gujarati
Rajasthani
Avestan*
Old Persian*
Baluchi
Khwarazmian*
Ossetian
Pamir
Pashto (Afghan)
Saka*
Sogdian*
Yaghnobi
Kurdish
Parthian*
Tajik
Farsi (Persian)
Arabic (Modern)
Hebrew
Latvian (Lettish)
Lithuanian
Old Prussian*
Burgundian*
Gothic*
Vandalic*
Danish
Norwegian
Swedish
Faroese
Icelandic
Old Norse*
English
Frisian
Anglo-Saxon*
Afrikaans
Dutch
Flemish
German
Yiddish
Luxembourgian
Plattdeutsch
Esperanto
Friulian
Italian
Ladin
Moldavian
Romanian
Romansch
Sardinian
Catalan
Ladino
Portuguese
Spanish
Haitian Creole
Langue d'oil*
Provençal
French
Latin*
Faliscan*
Oscan*
Umbrian*
Aeolic*
Arcadian*
Cyprian*
Doric*
Greek (Byzantine)*
Greek (Koine)*
Greek (Modern)
Ionic*
Hieroglyphic Hittite*
Hittite*
Luwian*
Lycian*
Lydian*
Palaic*
Minoan*
Mycenaean*
Breton
Cornish*
Welsh
Gaulish*
Irish
Manx*
Scottish Gaelic
Armenian
Grabar*
Phrygian*
Albanian
Illyrian*
Thracian*
Byelorussian
Russian
Ukrainian
Czech
Slovak
Kashubian
Polabian*
Polish
Sorbian (Lusatian)
Bulgarian
Macedonian
Church Slavonic
Serbo-Croatian
Slovenian
Agnean*
Kuchean*
*: extinct language
INDO-EUROPEAN FAMILY


Farsi (see first page)
Berber (Modern)
Kabyle
Riffian
Siwi
Tuareg (Tamashek)
Zanaga
Arabic (Modern)
Arabic (Classical)*
Arabic (Eastern)
Arabic (Egyptian)
Arabic (Southern)
Maltese
Afar
Saho
Beja
Burji
Galla (Oromo)
Geleba
Gimira
Janjaro
Kaffa
Konso
Maji
Sidamo
Somali
Hebrew (Israeli)^
Hebrew (Classical)*
Moabite*
Phoenician*
Punic*
Ugaritic*
Kushite*
Old Akkadian*
Assyrian*
Babylonian*
Aramaic*
Nabataean*
Palestinian*
Palmyrene*
Samaritan*
Syriac*
Angas
Bolewa
Gwandara
Hausa
Hiji
Kuseri
Mandara
Ngala
Ron
Shirawa
Sokoro
Amharic (Abyssinian)
Geez*
Harari
Tigre
Tigrinya
Egyptian, Ancient*
Coptic*
^Yiddish (see first page)
HAMITO-SEMITIC (or AFRO-ASIATIC) FAMILY
Cheremis (Mari)
Estonian
Finnish (Suomi)
Karelian
Komi
Lappish
Mordvin
Permian
Udmurt (Votyak)
Hungarian (Magyar)
Ostyak (Khanty)
Vogul (Mansi)
Samoyed
Salar
Uigur
Uzbek
Azerbaijani
Chuvash
Turkish
Turkoman (Turkmen)
Balkar
Bashkir
Karachai
Kara-Kalpak
Kazakh
Kazar
Kirghiz
Kumyk
Noghay (Nogai)
Tatar
Altai
Khakass
Tuvinian
Even (Lamut)
Evenki (Tungus)
Manchu
Nanai (Gold)
Sibo
Buryat
Kalmyk (Kalmuck)
Mongolian (Khalkha)
Yakut
URALIC AND ALTAIC FAMILY
Abazinian
Abkhazian
Adyghe
Circassian
Kabardian
Avar
Dargin
Lak
Lesgin
Tabasaran
Georgian
Chechen
Ingush
CAUCASIAN FAMILY


Malayalam
Tamil
Brahui
Gondi
Kanarese
Kui
Kurukh (Oraon)
Telugu
Tulu
DRAVIDIAN FAMILY
Ho
Mundari
Santali
Korku
Savara (Sora)
MUNDA FAMILY
Muong
Vietnamese
ANNAMESE-MUONG FAMILY
Bahnar
Cambodian (Khmer)
Cham
Khasi
Mon (Taliang)
Nicobarese
Paluang
Sakai
Samang
Sedang
Wa (Kawa)
MON-KHMER FAMILY
Chukchi
Kamchadal
Koryak
LUORA-WETLAN (or PALEO-ASIATIC) FAMILY
Mandarin
Amoy-Swatow
Cantonese
Fukienese (Min)
Hakka
Hsiang
Wu
Chuang
Lao
Nung
Puyi (Chungchia)
Shan
Tung
Thai
Burmese
Bodo
Chin
Kachin (Chingpawa)
Karen
Newari
Tibetan
Yi (Lolo)
Miao
Yao
SINO-TIBETAN FAMILY
Hawaiian
Maori
Marquesan
Niuean
Raratongan
Samoan
Tahitian
Tongan
Tuamotu
Uvea
Balinese
Batak
Bikol
Buginese
Dayak
Ilocano
Indonesian
Malay
Javanese
Madurese
Malagasy
Sundanese
Tagalog
Visayan
Chamorro
Caroline
Gilbertese
Marianas
Marshallese
Nauruan
Ponapean
Trukese
Yapese
Fijian
Malo
Marovo
Mono
Motu
Tolai
Yabim
MALAYO-POLYNESIAN (or AUSTRONESIAN) FAMILY

Bemba
Ganda
Kikuyu
Kongo
Lingala
Luba
Makua

Kimbundu
Umbundu

Ruanda
Rundi
Shona
Sotho
Swahili
Swazi
Thonga
Xhosa
Zulu

Bambara
Dyula
Loma
Malinke
Mende
Soninke
Vai

Akan
Ashanti
Bini
Ewe
Ibo
Nupe
Yoruban

Banda
Sango
Zande

Dyola
Fulani
Gola
Kissi
Temne
Wolof

Efik
Jukun
Tiv

Ijo
Katla
Koalib

Dagomba
Mamprusi
Mossi

Talodi
Tegali
Tumtum

NIGER-KORDOFANIAN (or NIGER-CONGO) FAMILY

Birked
Midobi

Kalenjin
Suk (Pokot)

Bari
Lotuko
Masai
Teso
Turkana

Bongo-Bagirmi
Efe
Mangbetu

Berta
Kunama

Acholi
Dinka
Nuer
Shilluk

Ganza
Gule
Gumuz
Koma
Mao
Uduk

Daza
Kanuri
Teda
Zaghawa

Fur

Maba
Nubian
Songhai

NILO-SAHARAN (or CHARI-NILE, or MACRO-SUDANIC) FAMILY

Bushman
Hottentot

Hatsa (Hadzapi)
Sandawe

KHOISAN FAMILY

Alyawara
Anmatjirra
Aranda
Bandjalang
Diyari
Dyangadi
Gugadja
Nyangumarda
Pitjantjatjara
Warlpiri
Yindjibarndi
Wangganguru

Burarran
Djamindjungan
Djeragan
Mangerrian
Maran
Mingin (Murngin)
Nyulnyulan
Tiwi
Waray
Wororan
Yanyuwa
Yiwaidjan

Aboriginal Languages

Hulliche (Kunko)
Mapuche
Picunche

Cana
Caranga
Lupaca
Pacasa
Ubina

Ayacucho
Aymara
Chinchaya
Cuzqueño
Quechua (Incan)
Quiteño
Tucumano

Tupí
Guaraní

Aguaruna
Cofan
Jívaro
Palta
Yaruro

Arawak
Taino*

ANDEAN-EQUTORIAL FAMILY

Aleut
Eskmo
(Inuit, Inuktitut)

ESKIMO-ALEUT FAMILY

Bororo
Carib
Cacibo
Ge
Tacana

GE-PANO-CARIB FAMILY

Chibcha*
Cuna
Mosquito
Paez
San Blas

MACRO-CHIBCHAN FAMILY

Chichimec
Nahuatl (Aztec)
Nahuatlato*
Pipil
Pochutla
Toltec*

Huichol
Papago
Pima
Tarahumare
Yaqui

Comanche
Goshute
Shoshone

Ute

Hopi
Paiute

Jemez
Kiowa
Taos
Zuñi

Tewa
Tiwa
Towa

AZTEC-TANOAN (or UTO-AZTECAN) FAMILY

Apache
Carrier
Chasta-Costa
Chipewayan
Hoopa
Kutchin
Navajo
Sarsi

Eyak

Haida
Tlingit

NADENE FAMILY

Chinantec
Mazahua
Mazatec
Mixtec
Otomí
Zapotec

OTO-MANGUEAN FAMILY

Maidu
Miwok
Yokuts

Huastec
Maya
Quiché

Mixe
Zoque

Huave

Nez Percé
Shahaptian

Cayuse
Chinook
Klamath
Modoc
Tsimshian

Nomlaki
Patwin
Wintu

Chauchila
Chukchansi

Totonac
Tunican

PENUTIAN FAMILY

Arikara
Caddo
Pawnee
Wichita

Pomo
Seri
Shasta
Washo
Yana*

Cayuga
Cherokee
Huron (Wyandot)
Mohawk
Oneida
Onondaga
Seneca
Tuscarora

Alabama
Chickasaw
Choctaw

Creek
Muskogee
Seminole

Cocopa
Kamia
Maricopa
Mohave
Yavapai
Yuma

Assinboin
Catawba
Crow
Dakota
Hidatsa
Omaha
Osage
Sioux (Dakota)
Yuchi

Iowa
Winnebago

Comecrudan*
Jicaque

HOKAN-SIOUAN FAMILY

Algonquin
Ojibwa (Chippewa)
Ottawa

Fox
Sac (Sauk)
Kickapoo

Arapaho
Blackfoot
Cheyenne
Cree
Delaware
Illinois
Mohican
Miami
Micmac
Mohegan
Narragansett
Penobscot
Pequot
Shawnee
Yurok

Bella Coola
Chimakum
Clallam
Coeur d'Alene
Colville
Flathead
Nisqualli
Pend d'Oreille
Puyallup
Shuswap
Spokan
Tillamook

Bella Bella
Kitamat
Kwakiutl
Makah
Nootka
Nitinat

ALGONQUIAN-WAKASHAN FAMILY

Unrelated Languages Of The World

Ainu
Basque
Burushaski
Elamite*
Etruscan*
Hurrian*
Japanese
Korean
Meroitic*
Sumerian*



ALIEN LANGUAGE MODIFIERS TABLE

Alienness Of Language	Extra Cost
Virtually Human	+0
Moderately Alien	+1
Very Alien	+2
Extremely Alien	+3
Method Of Communication	**Extra Cost**
Spoken	+0
Spoken, but uses difficult sounds	+1
Ultrasonic or other non-Human sounds	+2
Visual language	+2
Scent or Exotic Sense Language	+3

the Language Familiarity Table) or with Northern Germanic Languages (Swedish, Norwegian, Danish, and Icelandic).

LANGUAGES BY GENRE

For the most part, Languages work the same in all genres. A few differences or options are noted below.

Cyberpunk/Near Future

In Cyberpunk campaigns marked by rampant societal decay, Literacy may no longer be commonplace; characters have to pay for it. This might also apply in Cyberpunk or Science Fiction campaigns where "reading machines" and the like are so readily available that people no longer need to learn how to read.

Fantasy

Most Fantasy worlds feature a plethora of languages for characters to learn. Not only can races have multiple languages among themselves (much like humans on Earth have English, French, Norse, Swahili, and so on), but typically each race has at least one language unique to it. Thus, characters can become fluent in Dwarven, Elvish, Goblin-speak, or even Draconic!

Some other languages that occur in many Fantasy settings include: Common (a "common tongue" spoken extensively throughout the world, usually developed for purposes of trade and travel [and to save GMs and players the difficulty of roleplaying communications problems]); Thieves' Cant (a heavily developed argot used by thieves, assassins, and the like, usually limited to subjects of interest to them); and wizards' tongues (special languages developed for spellcasting, wizardly communication, talking with spirits, and so on).

In most Fantasy campaigns, characters are not literate by default. They must pay the +1 Character Point for Literacy.

Gamemasters who enjoy creating languages for their Fantasy worlds may also want to develop a Language Familiarity Table showing the relationship between the various languages. This not only helps to "flesh out" the setting, it encourages characters to take languages by providing a slight cost savings. The Table on page 198 of *The Turakian Age* provides an example of this sort of thing. And some Fantasy languages (such as the tongues of demons or elementals) may be so "alien" to characters that they cost extra (see the Alien Language Modifiers Table).

Science Fiction

In Space Opera and other low-realism games, everybody may speak a common language — Galactic, or Interlang, or whatever. (In *really* pulpish games, aliens all mysteriously know English.) For more detailed settings, each alien civilization has its own language, and learning them can be a major headache. Alien languages add points to the cost of each level of fluency, as shown on the accompanying table. Use all modifiers that apply.

The table accounts for two variables: the alienness of the language and the method of communication. The GM determines the level of alien-ness (with "Human" meaning "the character's own species"). In a Space Opera campaign, many languages will be Virtually Human, while in a more realistic game Moderately Alien is the best the characters can hope for in most situations.

The methods of communication a language uses may prevent a character from learning it at all (or at least using it without special technology). If the Rigellians communicate with scents that Humans cannot emit, the two species cannot communicate until Humans develop special devices to emit the proper odors. See Jack Vance's superb short story "The Moon Moth" for an example of how characters can get themselves into trouble with unfamiliar methods of communication.

Gamemasters who posit a common origin for the sentient species of the Galaxy — a mutual progenitor, or an ancient race that "seeded" the planets genetically — might try to come up with a Language Familiarity Table suitable for their *Star Hero* campaigns. However, even allowing for such a common origin, most languages diverge so quickly from planet to planet that there's not enough similarity between them to justify a point savings.

LIPREADING

Type: Intellect Skill (roll: 9 + (INT/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

This Intellect Skill, also known as "Speechreading," allows a character to read someone's lips to tell what he's saying.

Compared to many Skills, Lipreading is fairly simple and one-dimensional: it does just one thing, let a character read lips. But that doesn't mean it can't be extremely useful in certain situations. It's most often used by the deaf to understand what speakers say, but it can also come in handy when a character who can hear needs to understand what's being said in a noisy situation... or when he wants to "eavesdrop" on a distant conversation.

LINGUISTIC BARRIERS

Several factors govern how easy it is to use Lipreading, and thus how likely it is that the character succeeds in reading lips. First and foremost, a character must know the language being spoken to lipread it successfully. If he doesn't know the language, the best he can hope for is to understand phonetic blocks of sound — and even then he's a lot less likely to "read" them correctly.

Even if the character understands the language, the type of speech involved and the words use may cause difficulties. Some phonemes, such as TH/F/V, SH/CH, B/M/P, S/Z, and D/L/T look very similar when shaped by the lips. This can cause misunderstandings and confusion on the part of the lipreader. According to some sources, even on a good speaker only about 30-50% of the sounds can be easily and accurately read; the rest have to be guessed at or inferred. If the subject has been trained in *lipspeaking,* the ability to to speak to lipreaders — in game terms, he has PS: Lipspeaking and succeeds with a roll — his roll acts as a Complementary Skill to the Lipreading roll.

FACIAL OBSCUREMENT

Second, Lipreading works best if the character can see the subject's lips clearly (and of course a character can't use it if he can't see the subject's lips at all). Anything that gets in the way — for example, the subject isn't looking at him, or has a large beard or moustache — imposes a negative modifier on the Skill Roll. Similarly, trying to follow a multiple-person conversation with Lipreading is harder than just reading a single person's lips (the larger the group of speakers, the more difficult Lipreading becomes). The Lipreading Modifiers table lists several common situation that may obscure a subject's lips and make Lipreading more difficult.

The situation can become even worse in campaigns featuring non-human speakers. Races or species that look more or less like humans (such as Elves, Dwarves, and Orcs in most Fantasy worlds) can be Lipread normally. The more a species diverges from human, the harder it is to Lipread. For example, a reptilian or avian species that has a facial structure unlike humans' and small lips

would be very difficult to read. If a species lacks a mouth or lips, characters cannot Lipread its members at all.

EQUIPMENT

Lipreading doesn't require any sort of equipment, nor can any type of equipment make it easier to use; it's a purely personal Skill. However, a character may use sensory equipment to make it easier to perceive the lips he wants to read (such as binoculars or a telescope to view a distant subject).

POWERS AND LIPREADING

Some Enhanced Senses may make Lipreading easier by improving a character's PER Roll (or making a PER Roll possible in unusual conditions). Telepathy, Mind Link, and other non-auditory methods of communication render Lipreading unnecessary. A character who wanted to have a "super-Lipreading" ability could build it with Telepathy or perhaps a properly-constructed Enhanced Sense.

CONSEQUENCES OF FAILURE

Typically failing a Lipreading roll means the character didn't understand the conversation, or that the subject turned his head or concealed his mouth in such a way that reading his lips became impossible. A badly-failed roll (by 4 or more) usually results in a misunderstanding or misinterpretation that could inconvenience or harm the character.

BASE TIMES

Lipreading takes as much time as the speech involved does. The lipreader has to focus on the speaker's mouth as long as the speaker talks, and thus Lipreading can tire a person out over time because of the mental concentration needed. (In "realistic" campaigns, the GM might even consider Lipreading to require the equivalent of Concentration [½ DCV and restricted movement] throughout its use.) For a short speech (a Full Phase or less), using Lipreading usually qualifies as an Action that takes no time.

LIPREADING MODIFIERS

Circumstance	Modifier
Speech: Subject Is...	
Speaking slowly and clearly	+1 to +3
Speaking normally	+0
Speaking quickly	-1 to -3
Shouting or yelling	-2 to -4
Chewing or eating	-1 to -3
Exaggerating speech or features	-1 to -3
Using lots of confusing "sounds"	-1 to -3
Succeeds with PS: Lipspeaking	Complementary bonus
Multiple people in a conversation	-2 to -5
Facing: Subject Is...	
Looking right at character	+0
Looking at character obliquely	-1 to -2
Barely looking at character	-3 to -5
Looking away from character	Lipreading not possible
Facial Hair: Subject Has...	
Large moustache/beard	-1 to -3
Really bushy moustache/beard	-2 to -5
Facial Structure: Subject's Face/Lips Are...	
Very similar to human	+0
Similar to human	-1
Unlike human	-2 to -5
Very unlike human	-6 to -9, or even impossible
Nonexistent	Lipreading not possible

SUBDIVIDING LIPREADING

In campaigns featuring many different speaking races or species, the GM might require characters to buy Lipreading by race/species. For 2 Character Points a character can make an INT-Based Roll to read the lips of one species, each additional species (or perhaps type of species — mammalian, reptilian, avian, and so on) costs +1 Character Point.

LIPREADING BY GENRE

Lipreading works the same in all genres (though as noted above, some genres, like Fantasy and Science Fiction, may feature non-human characters whose lips aren't easy to read). Some genres may feature magic or advanced technology that renders Lipreading obsolete or makes it much easier.

LOCKPICKING

Type: Agility Skill (roll: 9 + (DEX/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

This Agility Skill allows a character to open key, combination, electronic, and magnetic locks using special tools instead of keys, and to create and install locks. A character with Lockpicking knows about the many different types of locks that exist (and their advantages and weak points), the best methods and tools for picking or bypassing each type, types of lockpicking tools and the benefits and drawbacks of each, how to obtain (or make) lockpicking tools, and so forth. An expert can pick some locks in an amazingly short time — often just as fast as using a key. Characters also use Lockpicking to figure out how to open shut containers (and the like) that aren't necessarily locked, but which have unusual, clever, or puzzling opening methods. (Such containers are often hidden, requiring Concealment to find them before the character can open them.) Lockpicking does not allow a character to detect or bypass alarms, traps, and other security devices; that requires Security Systems (page 268).

Complementary Skills for Lockpicking typically include Mechanics and Touch-based PER Rolls for picking key and combination locks, and Electronics for picking electronic and magnetic locks.

A BRIEF HISTORY OF LOCKS

Historically, the ancient Egyptians invented the pin tumbler lock, which they made out of wood and metal, in about 2500 BC. Their design was primitive and simplistic compared to modern versions, of course (and also much larger), but the basic parts and principles are all there. Later civilizations learned to make them entirely of metal, but the pin tumbler lock remained the only one available for millennia. The Romans refined the concept by putting the boltwork in an iron case and using iron or bronze keys; the keys were often attached to finger-rings, since Roman togas lacked pockets.

In medieval Europe, locksmiths' guilds arose in the fourteenth century to govern the practice of lock-making, and many locks became ornate works of art because only nobles and wealthy merchants could afford them. (Some locksmiths became skilled at hiding a lock's keyhole behind part of the sculpture on these locks; finding a hidden keyhole requires a Concealment roll.) But technologically they advanced little. Internal works and more complex keys evolved, but locks remained relatively easy to bypass.

In the late 1700s, locksmiths in England invented the tumbler principle for internal wards, which significantly improved the security of the lock. But weaknesses still existed, though the "barrel locks" designed by several locksmiths advanced the art of security further.

Linus Yale, Sr. invented the modern brass pin tumbler lock in the 1820s or 1840s (sources differ), and most modern locks descend from it to some degree. Beginning in the late nineteenth century other types of locks become available.

TYPES OF LOCKS

The base chance to pick a lock is modified by its type and quality. The Lockpicking Modifiers table lists many different types of locks and the modifiers for each. Most locks fall into one of three categories.

Warded Locks

The first, and generally most simple, is *warded locks.* These have internal wards, or obstructions, to prevent unauthorized keys from entering the keyway. Many old locks and a few padlocks fall into this category, as do many locks on low-security doors like those of storage sheds. They're relatively easy to pick

Tumbler Locks

The largest and most common category of locks are *tumbler locks,* such as the pin tumbler lock. Tumblers are small metal objects inside the lock casing that move. The key to the lock moves them in the right way to open it; wrong keys won't move them properly, so the lock won't open. Picking them involves using lockpicking tools to move the tumblers into the proper alignment.

Tumbler locks fall into three basic types. *Lever tumbler locks* are often used on luggage, briefcases, desks, cabinets, safety deposit boxes, lockers, and in other relatively low-security applications. *Disk tumbler locks* range from simple (used on some desks, file cabinets, and automobiles) to extremely secure versions used on safes. *Pin tumbler locks* are used in virtually every type of lock and come in an astonishing variety of configurations.

Combination Locks

Combination locks don't use keys. Instead, the user has to enter the right sequence of numbers, either via pushbuttons or a dial, to operate the lock mechanism correctly and open it. Some even require electrical current, magnetic cards, biometric readings, or the like to open. Picking these types of locks is often extremely difficult, since the lock mechanism is entirely sealed off. They're used on an enormous variety of doors and like objects.

Handcuffs

Handcuffs, leg cuffs, and thumbcuffs don't have unique types of locks, but they're a type of security mechanism characters in many genres encounter frequently. Typically they use a special type of barrel key that lifts a toothed locking mechanism called a pawl, thus allowing the ratchet arm of the cuffs to swing open freely. A skilled lockpicker can open them even with improvised tools, such as a properly-bent paperclip, or by "shimming" (covering) the pawl with a thin strip of metal so the ratchet can open. Double-locked cuffs are harder to pick and can't be shimmed. Handcuff keys tend to be standardized, so a given key can usually open many types of cuffs.

LOCK INSTALLATION METHODS

Locksmiths often refer to locks according to the method by which they're installed.

A *rim lock* is one mounted on the surface or rim of a door or other object to be locked. Some household deadbolt locks fit this description.

A *mortise lock* is one installed in a hollowed-out (mortised) cavity in the door. They're common on many modern office and commercial doors.

A *bored lock* is one installed by drilling two holes in the door (one for the cylinder, one for the bolt mechanism). Many household locks are bored locks.

Lock installation methods have no effect on Lockpicking rolls.

SAFECRACKING

One of the most dramatic examples of lockpicking, in the loose sense of "getting into a locked area or container by non-standard means," is safecracking. Although there are legitimate uses for the safecracker's art — such as opening safes for owners who have lost keys, or after the owner dies and his heirs need it opened — in the adventure gaming context it's most often used for criminal purposes.

Deducing The Combination

There are basically six ways to open a safe, vault, or like device. (Most of these fall under the rubric of the *Lockpicking* Skill even if they don't literally involve picking a lock; GMs may also require other Skills, if appropriate.) First, the safecracker can deduce the combination somehow. He may find it written somewhere nearby (or guess it because the safe's owner has used an easily-deduced number, like his birthday), learn it through surveillance, force it out of someone who knows, or use a safe manufacturer's pre-set combination that the safe's owner hasn't bothered to change.

Manipulation

Second, a safecracker can *manipulate* the safe's lock to open it. This is the classic movie trick of putting one's ear to the safe and slowly turning the dial while listening for the tumblers to fall into place. Although possible, this method requires a great deal of practice and skill, as indicated by the Lockpicking modifiers for the types of locks used on safes. Manipulation requires a modified Lockpicking roll and usually takes a long time — 20 Minutes, if not more. Characters who use electronic amplification devices or other special safecracking tools can reduce this time considerably. Similarly, it's possible to use an industrial vibrator (a tool for working with concrete) to "shake" the wheels of the lock into proper position to open the safe, but this only works on older or cheaper safes and tends to numb the user's hands.

"Jimmy Valentine" is underworld slang for the ability to "pick" safe locks by figuring out the combination via manipulation (or for a thief who can use that method). Older safes have disc tumbler locks in which the tumblers aren't isolated from the handle, allowing a skilled thief to "feel" when the tumblers align properly. Characters with Lockpicking can Jimmy Valentine an appropriate safe lock or similar lock, but must succeed with their Skill Roll at a -5 penalty (this penalty replaces the one listed for "disk tumbler lock (old)" in the Locks Modifiers Table).

To make manipulation harder, some safe manufacturers now cut false notches in the wheels of the lock. This adds another -1 to -2 penalty on top of the standard modifier for the type and quality of the lock (maximum of -10).

Drilling

Third, cracking open safes (and other locks as well) often involves more than simply picking a lock. Instead, the character has to actually drill or cut holes in the door and/or lock so that he can see the mechanism with a borescope (and thus manipulate it properly), destroy the lock, cut a hole in the side of the safe, or place explosives so he can blow open the lock (doing this properly requires Demolitions). Unlike true Lockpicking, which may not leave any significant traces to tip someone off that the lock was opened, these methods inflict permanent physical damage that the character cannot hide. (The same applies to other brute force methods of entry, such as attacking a door's hinges.) Drilling a safe usually has a Base Time of 1 Hour.

The more sophisticated the locks involved, the more powerful (and expensive!) the tools a character needs. Drilling through case-hardened vault steel often requires diamond-tipped drill bits, industrial-strength oxy-acetylene torches, and the like.

Peeling And Punching

Fourth, safecrackers can *peel* or *punch* an older or cheaper safe open. Peeling involves using crowbars, hammers, axes, and other tools to pry open one edge of the safe door one layer at a time until the safecracker can reach inside the safe. This requires a lot of effort and time (1 Hour or more), and makes a lot of noise, but is effective in the right circumstances. Punching is much quicker — it involves knocking the lock dial off, then smashing the lock itself into the safe so the door opens, and takes about 20 Minutes — but equally as noisy and crude.

In game terms, the succesfulness of these methods doesn't really depend on Lockpicking. The

LOCKPICKING MODIFIERS

Type Of Lock	Quality Of Lock: Poor	Average	High	Examples
Combination Locks				
Combination padlock	+1	+0	+0	Simple form of disk tumbler lock
Electronic combination lock	-5	-6	-7	Some hotel and office safes
Electronic key lock	-3	-4	-5	Some bank doors
Keypad/pushbutton locks	-2	-3	-4	Highly secured doors
Magnetic lock/card lock	-2	-3	-4	Highly secured doors
Sesame lock	-1	-2	-3	Briefcases, some padlocks
Tumbler Locks				
Disk tumbler lock (old)	-1	-2	-3	Older safes
Disk tumbler lock (modern)	-5	-7	-9	Modern safes
Double-sided disk tumbler	-1	-2	-3	Showcases, some vending machines
Double-wafer lock	+0	-1	-2	Some vending machines, cabinets
Isolated keyed tumbler locks	-2	-3	-4	Pharmacies, hospitals, payphones
Keyed disk tumbler lock	-2	-3	-4	General purposes, gaming machines
Lever tumbler lock	+0	-1	-2	Some padlocks, some desks
Multiple row pin tumbler	-2	-3	-4	Some burglar alarms, slot machines
Mushroom/spool pin tumbler	-1	-2	-3	Some bank doors, some padlocks
Pin tumbler lock (basic)	+1	-0	-2	House doors, some padlocks
Radial pin	-1	-2	-3	Some vending machines, coin boxes
Tubular rim cylinder lock	-1	-2	-3	Some vending machines, coin boxes
Radial tube pin tumbler lock	-1	-2	-3	Some burglar alarms
Side-bar wafer lock	+0	-0	-2	Most cars
Twisting pin tumbler lock	-1	-2	-3	House doors, some padlocks
Wafer tumbler lock	+1	-0	-1	File cabinets, garage doors, desks
Warded Locks				
Warded lock	+0	-0	-1	Some padlocks, older doors
Handcuffs, et al.				
Single-locked	-1	-2	-3	
Double-locked	-2	-3	-4	



GM may require a basic Lockpicking roll for the character to start the job properly, but after that it's a matter of how much damage he can do with his tools versus the safe's BODY and DEF.

Burning

Fifth, oxy-acetylene torches and the like can burn through safes. This takes time — the thicker the walls and door of the safe, and the better the metal they're made of, the longer the job requires. (Assume a minimum Base Time of 1 Hour.) This method works best on older safes; modern safes use high-tech alloys that are much harder to "cut" with fire.

Burning has several potential drawbacks. First, it requires a lot of equipment, including the protective gear the user often has to wear. Second, it creates a lot of noise and smoke. Third, the heat may set the safe's contents on fire.

Explosives

Sixth, some safecrackers use explosives to "blow" a safe open. Doing this properly takes a minimum Base Time of 1 Hour and requires a Demolitions roll using the same modifier for Lockpicking the safe. Success usually means the safe has been opened without significantly damaging the contents (if any). Failure by 1-3 means the blast didn't open the safe; failure by 4 or more means whether it opened it or not, the blast damaged the contents of the safe to the extent that they're worthless.

Other Methods

Other methods of safecracking include using x-ray equipment to view the lock so it's easily manipulated, using acid to eat through the safe door or wall, or cutting upon a safe with a concrete saw.

CREATING AND INSTALLING LOCKS

Characters can also use Lockpicking to manufacture and/or install locks. This requires a Base Time of 1 Hour. If the roll succeeds, the character's made and/or installed the lock successfully; if it fails, he hits a snag somewhere along the line; if it fails badly (by 4 or more) he hurts himself in the process or damages whatever he's installing the lock in.

Typically an installed lock just uses the standard modifiers listed in the Lockpicking Modifiers table. If the GM prefers, he can use the installer's Lockpicking roll in Skill Versus Skill Contests against other characters who try to pick the lock.

EQUIPMENT

Characters cannot perform Lockpicking without tools — various kinds of picks (lockpicks), tension wrenches or bars, and similar devices. Some types of locks require specific types of picks. Characters can use objects such as hairpins, credit cards, safety pins, small screwdrivers, and various bits and pieces of wire and thin, flat metal as improvised or makeshift lockpicking tools (this may depend on the type of lock). Standard equipment modifiers apply (see page 33).

A character with keymaking equipment and enough time can "pick" a lock by working it with a blank key. As the character senses out the bumps

SIMPLIFIED LOCKPICKING

If the detailed rules for Lockpicking in this section are more than your campaign needs, you can instead use this simple system that groups locks into various categories of quality:

Type Of Lock	Lockpicking Modifier	Lockpicking Roll
Poor quality	+1	8-
Average quality	-0 to -3	11-
Above Average quality	-4 to -5	14-
High quality	-6 to -7	17-
Very high quality	-8 to -9	20-
Superb quality	-10	23-

Alternately, if the GM prefers, he can require a Skill Versus Skill Contest to determine the outcome of a Lockpicking attempt — in other words, the quality of the lock (and thus the difficulty of picking it) is represented by giving the lock a high Skill Roll. The table above indicates the standard roll representing various levels of quality.

and grooves in the lock's chamber, he uses the keymaking equipment to modify the blank until he has a key that opens the lock. This takes a lot of time: a minimum of 20 Minutes assuming the keymaking equipment is available right there at the lock; more if trips to it are required. Since keymaking equipment isn't man-portable, the odds are that at least a short walk is necessary.

Of course, some locks are particularly tricky even if the character has the right tools. Difficult locks, such as the "High" quality locks on the accompanying table, typically impose a -1 to -5 modifier to the Lockpicking roll. Similarly, some locks *cannot* be picked as that term is normally understood. For example, since modern prison cell doors are typically locked electronically from a remote location, trying to pick one would be futile. To get through a cell door, a character would have to physically break the lock or tamper with the remote locking device.

The type of lockpicking equipment available typically matches the sophistication of the locks available — simple tools for simple locks, more advanced tools as locks become harder to pick. The GM may restrict the availability of quality equipment in early time periods (for example, maybe Victorian characters can only have *Good* equipment, while Pulp characters can have *Good* or *Very Good* equipment).

Keypad Dirt And Wear

Modern electronic combination locks and the like have keypads the owner uses to enter the code that opens the lock. "Picking" these is extremely difficult, but sometimes the owner leaves a clue. Through repeated use, the number keys he uses may accumulate dirt or wear down. That tells the character which keys are used the most, thus narrowing down the ones he has to experiment with. Some high-tech modern versions have keypads that scramble the numbers each time, making it impossible to gauge wear and dirt patterns; some of these locks are impossible to open without the combination or access key/card (or destroying the lock).

Rather than rely on dirt and wear, some thieves dust the keypad for fingerprints. A similar method is to surreptitiously coat the lock owner's fingers with a substance viewable with ultraviolet light, then to shine an ultraviolet lamp on the keypad after he uses it to determine which keys he pressed.

Pickguns

Pickguns are small, hand-held devices which pick locks; they've been available since 1922. The character inserts the forward "wand" of the gun into the lock and pulls the trigger. The machine moves and twists the wand until the lock opens. Pickguns only work on pin tumbler locks (and not even all of them), but provide +4 to the Lockpicking roll to pick them. (*Pickgun:* +4 to Lockpicking (8 Active Points); OAF (-1), Only Works On Some Pin Tumbler Locks (-1). Total cost: 3 points.)

The pick gun is a sort of "brute force" approach to lockpicking. It tends to leave telltale brass dust and damages the lock so that it may be easier to pick later (the GM may assign a bonus of +1 to later attempts to pick the lock, if appropriate).

Sensitized Fingers

Skilled lockpickers use many different methods to make their fingertips as sensitive as possible, so that they can better "feel" the movement of the picks, pins, and so forth. Some safecrackers reputedly keep their fingertips so sensitive that they can sense the combination to a lock by feeling the vibration of the tumblers as they click inside it.

Methods for sensitizing the fingertips range from various lotions and massage-like treatments for the fingers to abrading the fingertips with sandpaper. In game terms, this practice is best reflected by by purchasing +1 Enhanced Senses for the Touch Sense Group and using a Touch-based PER Roll as Complementary to Lockpicking (or perhaps by purchasing a +1 increase to the character's Lockpicking roll).

POWERS AND LOCKPICKING

At the GM's discretion Telekinesis with Fine Manipulation may substitute for lockpicks in some situations. Extra Limbs might help a character pick a lock more quickly if he has three or more manipulatory limbs able to work the lockpicking tools. N-Ray Perception might allow a character to see inside a lock, making picking it extremely easy.

Characters with the ability to change the shape of their hands or fingers might be able to create lockpicks out of them; similarly, a character might be able to Shrink to a small enough size to walk into a lock and manipulate it by hand. While this would work for most key locks, combination, electronic, and magnetic locks would be beyond the scope of all but the most extreme metamorphosis powers; depending on the campaign, this might entitle the character to take a Limitation on the Skill.

Characters can escape some types of Entangles, such as chains, with Lockpicking rather than Contortionist (assuming the character can reach the lock and has an appropriate tool or power to do

the job). If so, apply the Limitation *Escapable With Lockpicking,* which is similar to Escapable With Contortionist (page 140). If a character can escape an Entangle with both Lockpicking and Contortionist (as with handcuffs), simply include both Skills in the Limitation's name; the Entangle doesn't get an additional Limitation because of this.

CONSEQUENCES OF FAILURE

An unsuccessful Lockpicking roll usually just means the character cannot pick the lock. In such circumstances, characters must either find a way to improve their roll and try again, or resort to brute force or trickery to get past the lock. Badly failed rolls (by 4 or more) lead to worse consequences. They can mean a jammed lock, an alarm going off, or even a broken lockpick.

BASE TIMES

With a relatively simple lock (no more than a -2 modifier), a skilled lockpicker with the proper tools usually only needs a few seconds, at most, to open a lock. In game terms, the Base Time for Lockpicking a simple lock is a Full Phase. More complicated locks require more time — up to many minutes, even an hour or more for things like safecracking — and of course not having the proper tools extends the time even further in many cases. The text above notes Base Times for some specific uses of Lockpicking.

SUBDIVIDING LOCKPICKING

For campaigns involving a lot of work with locks, the GM may want characters to buy Lockpicking by categories, like Survival. The categories are Warded Locks, Tumbler Locks, Combination Locks, Safecracking, and Handcuffs. Buying one category costs 2 Character Points for a DEX-Based Roll; each additional category costs +1 Character Point. A character can use his Skill on a category he doesn't know at a -3 penalty; this typically takes twice the standard Base Time for the task.

LOCKPICKING BY GENRE

Cyberpunk/Near Future

All types of equipment are available in this era.

Dark Champions

All types of equipment are available in this era. Modern-era characters, just like superheroes and and near-future adventurers, may encounter the wide variety of locks indicated on the Locks Modifers table, and may have to devise some ingenious solutions to get past them.

Fantasy

In Fantasy settings, Lockpicking is in some ways easier, since usually only relatively primitive mechanical locks are available. (See above regarding the history of locks.) But Fantasy thieves have to contend with something more than just the quality of the lock: magic. The GM must decide whether a character with mundane Lockpicking abilities can pick magical locks or magically-sealed mundane locks. The answer typically depends on the nature and type of the spell/enchanted item involved. If the spell simply enhances an ordinary lock, then normal Lockpicking can probably open it — though there's a penalty to the roll (that's how such a spell would be built, as Change Environment to impose penalties on Lockpicking). If the spell magically seals or locks something (a door, a chest, or the like), then ordinary Lockpicking probably *cannot* open it, no matter how skilled the character is — countermagic spells are required. As a good rule of thumb, if the spell imposes penalties on the Lockpicking roll or requires a Lockpicking Versus Lockpicking Contest, allow one at the indicated penalty or as part of the Contest. If it uses some other method (Telekinesis or Force Wall, for example), then Lockpicking won't work; characters need countermagic instead. See *The Spell Of Locking And Opening* on page 243 of *The Fantasy Hero Grimoire* for an example of a locking-spell.

Martial Arts

All types of equipment are available if the game takes place in a modern-day setting; in fantasy/historical settings, refer to "Fantasy," above.

Pulp

Most of the locks of the Pulp era are relatively simple pin tumbler locks (+1 to -1 modifier to pick), but some types of more advanced locks are available (though no form of electronic lock is). Pulp-era safecrackers will run into disk tumbler locks (-1 to -3 penalty to pick) and other relatively secure locks.

On the other hand, lockpicking tools are also becoming better. The pick gun is invented in 1922, for example.

Science Fiction

Science Fiction locks may be mostly electronic and heavily computerized. Depending upon the GM's ruling and the nature of the lock in question, characters who want to "pick" them might use Computer Programming, Electronics, or Systems Operation instead of Lockpicking. Special devices may be developed to help bypass such locks.

All types of equipment are available in this era. Opening locks gets much easier when you have more advanced tools to do it with. Apply the Obsolete and Advanced Technology rules (see page 39) when a high-tech character tries to open a low-tech lock, or vice-versa.

Superheroes

All types of equipment are available in this era — but of course, characters' superpowers (Desolidification, Stretching, Teleportation, Telekinesis...) may make it easy to bypass locks even if they don't know Lockpicking.

Western/Victorian

Like Fantasy characters, Western/Victorian characters typically only have to deal with pin tumbler locks (even through the late twentieth century most locks are pin tumblers or other relatively simple locks).



MARTIAL ARTS

Type: Combat Skill (roll: N/A)
Cost: 3-5 points per Martial Maneuver; character must spend a minimum of 10 points on Martial Arts

Martial Arts represent any form of hand-to-hand combat that requires training (or innate ability or experience) and expertise, such as the precise movements and dodging of aikido, the hammer and tongs of boxing, the rough-and-tumble of dirty infighting, or even advanced weapon techniques like fencing. The *Martial Arts* section of Chapter Two of *The HERO System 5th Edition, Revised* discusses martial arts in detail, including the effects of the Martial Maneuvers, how to construct a Martial Arts style (like Karate or Boxing), and ways to use Martial Maneuvers in combat. For even more detailed information, including dozens of real-world styles and rules for creating your own Martial Maneuvers, see *The Ultimate Martial Artist* and *The HERO System Combat Handbook*.

MARTIAL MANEUVERS COSTS

Maneuver	Cost
Choke Hold	4
Defensive Strike	5
Killing Strike	4
Legsweep	3
Martial Block	4
Martial Disarm	4
Martial Dodge	4
Martial Escape	4
Martial Grab	3
Martial Strike	4
Martial Throw	3
Nerve Strike	4
Offensive Strike	5
Sacrifice Throw	3
+1 Damage Class	4
Weapon Element	1

The accompanying sidebar summarizes Martial Maneuvers' cost. Characters must spend a minimum of 10 Character Points on Martial Maneuvers (even if it's just two 5-point maneuvers).

MECHANICS

Type: Intellect Skill (roll: 9 + (INT/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

Mechanics allows a character to identify, understand, build, repair, and rework mechanical devices and their component parts. It covers a vast range of technology — from levers and pulleys, to simple wind- and steam-powered devices, to gasoline engines, hydraulic presses, and more. A character with Mechanics knows how mechanical devices work, how to design and build them, how to fix and modify them, and how to deduce their function and operation. He knows about the types of tools and technology used to perform Mechanics-related tasks, and how to use them. He's aware of the general history of mechanical devices and how mechanical technology has developed over time.

Technology-related Skill modifiers — including damage to subject, equipment, advanced/obsolete/alien technology, and technological compatability — play an important role with Mechanics. It's easy enough for a character to create or modify a device similar to those he's used to working with; it's another matter entirely to try to repair a heavily-damaged device on a tight deadline, or to try to determine the purpose and workings of a mechanical gadget that's nothing like anything the character's ever seen before.

COMPLEMENTARY SKILLS

Despite general references to "mechanical devices" throughout the description of this Skill, Mechanics isn't always the primary Skill a character uses to work on a mechanical device. Mechanics often functions as a Complementary Skill when the device the character's working on is covered by another Skill. This includes Lockpicking, Security Systems, and Weaponsmith when those Skills are used on mechanical devices, but can also extend to other Technological Skills as appropriate. For example, if a character wants to build an artillery piece, he uses Weaponsmith as the primary Skill with Mechanics as a Complementary Skill. If the GM feels the most important aspect of the work is the character's general knowledge of mechanical systems, he may want to reverse the relationship.

You can apply the rules below for Mechanics generally to other Skills that involve working with mechanical devices unless their descriptions in this chapter have different or more specific rules. For example, if a character wants to use his Security Systems to disable a mechanical trap, just apply the rules and modifiers from *Disabling Mechanical Devices,* below.

Various Science Skills (especially SS: Mechanical Engineering and sometimes SS: Physics) are Complementary to Mechanics in many situations.

Uses Of Mechanics

Mechanics has five primary uses: creating and maintaining mechanical devices; modifying mechanical devices; disabling mechanical devices; identifying the purpose and nature of strange mechanical devices; and operating mechanical devices.

BUILDING AND MAINTAINING MECHANICAL DEVICES

First and foremost, a character with Mechanics can design and build mechanical devices. He may have to start from scratch, sketching out a blueprint and calculating the factors involved in the manufacturing process, or he may put together pre-made parts, modules, and components to create a finished device. Similarly, he knows how to maintain mechanical devices in good working order, and how to repair them if they malfunction or become damaged. Of course, to invent all-new mechanical devices, the character also needs the *Inventor* Skill (page 206); Mechanics by itself doesn't allow a character to invent new gadgets.

The GM can take either of two approaches when determining how easy it is for a character to build a mechanical device. First, he can have the character write up the device using the *HERO System* rules, then apply a penalty of -1 per 10 Active Points in the device to the Mechanics roll to create it. A second (and more simple) approach is to assign the device a complexity rating using the accompanying Device Complexity table and derive the modifier from that. In either case, the modifier is in addition to any applicable modifiers from Chapter One, mentioned above.

If the GM requires characters to make Mechanics rolls periodically to maintain their mechanical gadgets, typically that roll suffers no modifier based on Active Points or the like. It may still suffer modifiers for things like not having the right tools or working with alien technology.

Repairing And Modifying Mechanical Devices

Related to building mechanical devices is repairing them. During the course of a character's adventures his mechanical devices may burn out, get smashed to bits by an ogre's war maul, be set on fire, transmogrified by an alien blaster, or otherwise discombobulated — so sooner or later they're going to need a little patching up. To determine the difficulty of making repairs, the GM should decide how damaged a device is — in game terms, what percentage of its BODY it's taken as damage. For each 10% (or fraction thereof), impose a -1 penalty on

DEVICE COMPLEXITY

Complexity Of Device	Modifier
Very Simple	+2
Simple	+1
Average	+0
Complex	-2
Very Complex	-4
Highly Complex	-6
Incredibly Complex	-8

the Mechanics roll to make repairs. (This penalty replaces the standard "damage to subject" penalty.) The GM can modify this as he sees fit to reflect the ease or difficulty of a particular repair. At the GM's option a character may be able to diminish the penalty by splitting the work into discrete tasks, each task encompassing only part of the repairs and requiring a separate roll.

Modifying a mechanical device — changing it to alter or improve its function — works similarly to building one. The character should write up the two devices in *HERO System* terms, then subtract the Real Points of the existing device from those of the modified/improved device. If the total is 0 or less, then typically he suffers no penalty to his Mechanics roll (unless the GM chooses to impose one). If it's greater than 0, then for each 10 Real Points (or fraction thereof) by which the modified/improved device exceeds the existing device the roll suffers a -1 penalty.

DISABLING MECHANICAL DEVICES

A character can use Mechanics to shut off or disable mechanical devices or otherwise prevent them from functioning. (Of course, this assumes he wants to do so without significantly damaging the device — anyone can disable an engine without making a Skill Roll simply by smashing it to bits, blasting it with a shotgun, embedding an axe in it, or the like.) Typically a roll to disable a device suffers a penalty equal to -1 per 10 Active Points in the device, but the GM should adjust that penalty downward as necessary. Just because a device is powerful or technologically sophisticated doesn't mean it's tamper-proof.

IDENTIFYING MECHANICAL DEVICES

During the course of his adventures it's possible that a character with Mechanics will encounter a mechanical device he doesn't instantly recognize or understand. (This is particularly likely in Science Fiction and dimension-hopping campaigns where characters frequently find alien gadgetry.) In that case the character can make an Mechanics roll to identify the nature and purpose of the device: "This is some sort of threshing device, but not for the type of grain we grow on Earth"; "This is a weapon that uses mechanical principles to fire a shaped missile over a long distance — I'd estimate 500 yards, but it's hard to tell without the missiles"). Modifiers for obsolete/advanced and alien technologies apply.

OPERATING MECHANICAL DEVICES

Once a character has identified the nature and purpose of a strange mechanical device, he can make an Mechanics roll to figure out how to turn it on and/or operate it. (Though again, as discussed above, if another Skill directly covers the device in question, it's the primary Skill and Mechanics is Complementary.) Modifiers for obsolete/advanced and alien technologies apply, and the GM may also impose a penalty based on the device's Active Points if desired. Characters can also use Mechanics to turn on a mechanical device or system for which they don't have the proper key (or other activating device) without necessarily operating it.

Other Rules

EQUIPMENT

Mechanics requires equipment. A character needs all sorts of tools — screwdrivers, hammers, wrenches, precise measuring devices, and more — as well as appropriate spare/replacement parts to create, work with, and modify most mechanical devices. What's worse, even two relatively similar mechanical devices (such as two automobile engines) may be put together so differently that characters need very different sets of tools and gear to use them — the price of increasing variation and sophistication in manufacturing techniques. As technology advances and becomes more "user-friendly," the number of tools needed may increase or decrease (though in the latter case, the ones still required may likewise become more advanced). But in the end a good old-fashioned pair of pliers may be all that's needed to solve some problems.

POWERS AND MECHANICS

The power to control mechanical devices is a subset (often a rare one) of the "cyberkinesis powers" mentioned under Electronics. Such powers typically involve using Telekinesis to turn on and manipulate the works of mechanical devices.

CONSEQUENCES OF FAILURE

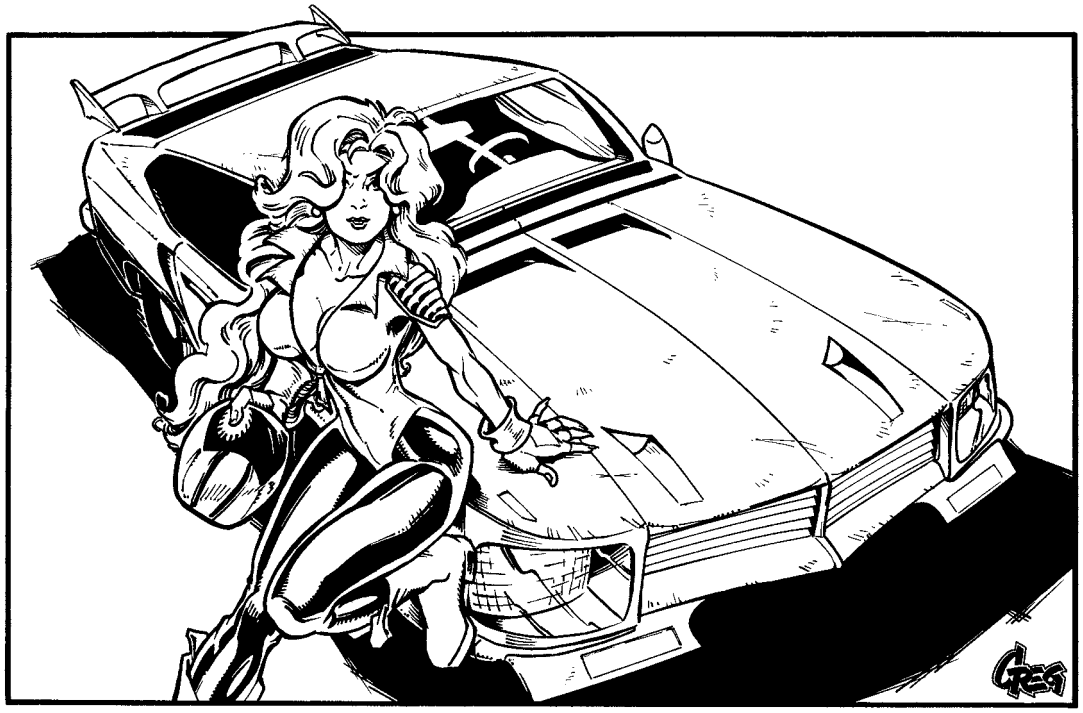
The consequences of failing an Mechanics roll depend largely on what a character was trying to do.

When a character tries to build, repair, or modify a mechanical device, a failed Skill Roll means he doesn't get the job done. He can't figure out how to build the device, his repairs don't fix the problem, and so on. Alternately, the device may work... at first. Soon it malfunctions, undoubtedly at a very bad moment for the character. A badly-failed roll (by 4 or more) often indicates that his efforts have made the situation *worse:* while working he breaks a crucial tool or hurts himself; his repairs or modifications damage the device or make it work less well.

When a character tries to disable a mechanical device, failure means it continues to function properly. A bad failure (by 4 or more) may accidentally activate alarms, cause the device to go into "security lockdown" so that repeated attempts to disable it become even harder, or the like.

When a character tries to identify a strange mechanical device, failure means he has no idea what the device does. A bad failure (by 4 or more) means he *mis*interprets it, deciding it does something that it doesn't actually do (usually something that will get him in trouble when he tries to make the device do that).

When a character tries to operate a strange mechanical device or one he lacks the key for, failure means he can't get it to work (and perhaps gets hurt while trying). A bad failure (by 4 or more) means he badly hurts himself, he damages the device, he sets off an alarm, or the like.



BASE TIMES

Mechanics tends to be time-consuming work. Some tasks, like minor adjustments to a car, may only take a few minutes, but most heavy-duty creation and modification work can take hours. For those sorts of tasks, 1 Hour per 10 Active Points in the device (or in the amount of Active Points in the modification) makes a good benchmark for the GM, but he can adjust the final total as appropriate.

Disabling a mechanical device usually requires a minimum of 1 Turn per 10 Active Points in the device (and sometimes longer), but again, the GM can adjust this as he sees fit. It's not uncommon for characters in the comics, action movies, and novels to shut off some devices in just a few seconds.

Identifying the nature and purpose of a strange mechanical device usually requires a minimum of 1 Minute per 10 Active Points in the device. User-friendliness features may diminish the time required.

The time required for operating or activating a mechanical device varies wildly. Some tasks may take no more than 2-3 Phases, or at most 1 Turn. On the other hand, activating a large, complex device from total shutdown without the proper tools may take many minutes or even hours.

SUBDIVIDING MECHANICS

The standard rules for Mechanics don't differentiate between the types of devices a character can work on — being able to fix one mechanical device lets him fix any mechanical device. In more realistic campaigns, characters buy Mechanics in categories such as Automobile Engines, Airplane Engines, Astronautical Engines, Hydraulic Systems, and Robotics. A category costs 2 Character Points for an INT-Based Roll (or 1 Character Point for just a subcategory); additional categories or subcategories cost 2 or 1 Character Points respectively; improving the character's roll with all of his categories and subcategories costs +1 Character Points for each +1 to the roll. The GM may want to expand the available categories based on the types of technology available in his campaign.

If you use this form of Mechanics, at the GM's option a character can try to use his Mechanics on a category or subcategory of devices he hasn't paid for, but he has to make his Mechanics rolls for doing so at a -3 (or worse) penalty.

MECHANICS BY GENRE

Mechanics applies in any genre and time period advanced enough to have mechanical devices — some of mankind's earliest machines were based on mechanical principles. The only thing that changes as time and technology advance is the extent of the character's knowledge of what types of mechanical devices are available and what they can accomplish.

Fantasy

In most cases, Mechanics isn't an appropriate Skill for Fantasy games; Fantasy worlds typically have no engines to work on. However, characters could still use this Skill for such chores as building and repairing wagons, siege engines, winches, millwheels, and the like. In campaigns featuring magicomechanical engineering and the like, Mechanics may become a fairly common Skill. As with Inventor, the GM should not allow characters to use Mechanics to make world-altering technological changes unless that's what he wants.

Science Fiction

Mechanics remains mechanics in the future, even if it takes a back seat to electronics or more advanced technology. The chief difference is that some systems require extremely specialized tools — repairing a nanotech device would call for a powerful microscope and tiny manipulators, while fixing a nuclear reactor demands remote-operated robots to avoid a messy death.

MIMICRY

Type: Intellect Skill (roll: 9 + (INT/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

A character with this Intellect Skill can imitate someone else's voice, animal cries and calls, and certain other sounds flawlessly.

MIMICRY BASICS

When a character uses Mimicry, he engages in a Skill Versus Skill Contest pitting the listener's Hearing PER Roll against the Mimicry roll. If the character wins, the listener believes the voice/sound is real — in other words, that the person being imitated *is* the person speaking, the animal sound is genuinely that of the animal in question, or the like. The more the character wins the Contest by, the more accurate his imitation.

If the character loses the Contest, the deception is immediately obvious to any listener who knows the voice being imitated, the cries made by the animal, or the sound being made. If a listener lacks this familiarity, the character may still get away with the deception (at least for a little while...), but something about his imitation is "off" in a way that alerts the listener and makes him suspicious.

"Realistically," sound analysis equipment used to study an imitated voice or other sounds easily reveals that even a highly-accurate imitation is just that — an imitation. In more cinematic campaigns, characters may be able to mimic voices and sounds well enough to fool scientific analysis.

IMITATING VOICES

Characters most often use Mimicry to imitate the voice of other persons. By altering voice quality, tone, and pitch, and copying the phrasing, intonation, accentuations, and rhythms of another person's speech, a character can convincingly imitate that person's voice. Many different modifiers can apply to imitating voices, including:

■ Length Of Speech: The longer the character speaks (or makes some sound), the more likely he is to slip up or make a mistake, thus revealing the deception.

■ Environment: If a character's in a particularly noisy area, it becomes easier to imitate a voice because the ambient noise hides the minor errors in the imitation

■ Familiarity: The better the listener knows the voice being imitated, the harder it is to imitate it well enough to fool him. Conversely, the more familiar a character is with a voice he's imitating (*i.e.,* the more he's listened to that person, up close and in person), the better he is at mimicking it.

■ Gender: Imitating the voice of a person of the opposite gender imposes a -1 to -3 penalty based on relative differences in tone, pitch, and the like.

■ Language: If a character uses Mimicry to imitate a voice speaking any language that he does not have at least 4 Character Points of fluency in, he suffers a penalty based on how different the language and his well-known languages are.

■ Other Species/Races: In some campaigns, such as High Fantasy or Space Opera games, characters interact with non-human sentient species frequently. When mimicking a person not of his own species, a character usually suffers significant penalties. (In more cinematic campaigns, GMs may reduce this to a flat -1.) This is in addition to the penalty for foreign languages. Characters cannot use Mimicry to imitate beings who make sounds the character cannot produce. If a species communicates through means other than sound (such as flashing lights or pheromonic emissions), the GM must decide whether a character can mimic their "speech" at all, and if so what penalties this entails (usually at least -5).

■ Telephone And Radio: Imitating a voice over the telephone or radio transmission is easier than in person; the comparatively poor quality of the sound reproduction makes it harder to discern the fakery.

■ Whispering: It's usually a little easier to imitate a voice while whispering.

MIMICRY MODIFIERS

Voice Imitation	**Modifier**
Length of speech/making of sounds	
Full Phase	+0
1 Turn	-1
1 Minute	-2
5 Minutes	-3
...and so on	
Environment: noisy surroundings	+1 to +3
Familiarity: voice being imitated is...	
Completely unknown to listener	+2
Has been heard once or twice	+1 to +0
Known to listener	-1
Well-known to listener	-2
Extremely well-known to listener	-3
Familiarity: character's familiarity with voice being imitated is...	
Poor (has heard once or twice at most)	-1
Fair (has heard a few times)	+0
Good (has heard a dozen times)	+1
Very Good (has heard dozens of times)	+2
Imitating opposite gender	-1 to -3
Speaking foreign language (see text)	-1 to -3
Imitating different species/race	
Speaks in same sound range	-1 to -2
Speaks in different sound range	-3 to -4
Speaks in very different sound range	-5 or greater
Speaking over radio or telephone	+1 to +2
Whispering	+1
Animal Imitation: Sound Is...	**Modifier**
Very Simple	+2
Simple	+1
Average	+0
Complex	-1
Very Complex	-2

The Mimicry Modifiers table summarizes these modifiers.

IMITATING ANIMALS

Characters often use Mimicry to imitate animal calls and cries (some animals use it this way, too, to lure prey to them). Fooling another human this way is one thing, but fooling another animal may prove much more difficult due to animals' heightened perceptions. Depending on how elaborate or richly-toned the sound is, mimicking it may be easy or hard, as indicated by the Mimicry Modifiers table. Most bird calls and songs are Very Simple to Average; mammal and reptile sounds tend to be Average to Very Complex.

Birds such as parrots, mynahs, and crows can buy Mimicry to imitate human speech and other sounds. They don't understand what they're "saying," but they can sometimes mimic people quite well, right down to accents.

IMITATING OTHER SOUNDS

Characters can use Mimicry to imitate other sounds, such as police sirens, doors and cabinets shutting, chainsaws, the sound of a gun being cocked, and so forth. Usually this entails at least a -1 penalty, since the sound of the human voice differs from sounds created by such artificial means. The GM determines whether a character can imitate a particular sound. Some sounds defy reproduction by the human voice, though experienced mimics can convincingly imitate hundreds of noises.

EQUIPMENT

Typically Mimicry is a personal Skill that doesn't involve equipment. However, many different types of equipment are built with Mimicry, allowing characters to imitate voices and other sounds even when they haven't bought this Skill. The most common example are duck calls and similar devices used by hunters to lure game, but voice alteration/imitation devices and software also exist in the modern day. In the future such equipment may become even more accurate in its ability to imitate sounds.

POWERS AND MIMICRY

Images to the Hearing Group effectively take the place of Mimicry, and with a large enough imposed penalty on listeners' Hearing PER Rolls it can be virtually flawless. Extremely talented mimics may buy an Images power with the Limitation *Requires A Mimicry Roll* to indicate the extent of their skill.

CONSEQUENCES OF FAILURE

The consequences for failing a Mimicry roll are discussed above.

BASE TIMES

The Base Time for imitating most discrete sounds is a Half Phase. Imitating a voice during a conversation lasts for the length of the conversation.

SUBDIVIDING MIMICRY

If the GM wants to make Mimicry a more precisely-defined ability, he can split it into three Skills: Mimic Humans; Mimic Animals; Mimic Artificial Sounds. Each of these could be its own Intellect Skill, or the GM could let characters buy them as categories: 2 Character Points for the first category, +1 Character Point for each additional category.

For cinematic campaigns, the GM might consider combining Mimicry and Ventriloquism into a single Intellect Skill, *Voice Manipulation.* This isn't necessarily realistic, but it may encourage characters to buy and use these two fun but relatively uncommon Skills more frequently.

MIMICRY BY GENRE

Mimicry works the same in all genres.

NAVIGATION

Type: Intellect Skill (roll: 9 + (INT/5) or less)
Cost: 2 Character Points for a base roll with one category; each additional category or subcategory costs +1 Character Point; +1 to the roll with all categories and subcategories known per +2 Character Points

A character with this Intellect Skill can determine his location and plot an efficient course between two points. Navigation is extremely useful for characters who are charting unknown regions or want to find their way home when lost.

A character with Navigation knows about different types of landmarks and indicators of direction and how to use them. He also knows about and can use various types of navigational equipment appropriate to the forms of Navigation he knows, such as compasses, sextants, GPS devices, and pulsar sensors. He knows how to read maps and formal directional notations, how to calculate his latitude and longitude, and so forth. Characters can perform Navigation by a variety of methods, ranging from astronomical triangulation, to dead reckoning, to using the location of planets, stars, nebulae and other astronomical objects — it all depends on which Navigation subskills the character knows, where he's trying to use them, and how he was trained.

NAVIGATION MODIFIERS

Condition	Modifier
Landmarks*	
None/Very Obscure	-4
Scarce/Obscure	-2
Few	-1
Some	+0
Many/Prominent	+1
Copious/Very Prominent	+2
Pathway*	
Well-traveled or -marked	+1 or more
Poorly-traveled or -marked	-1 or worse
No pathway at all	-2 or worse
Target (see text)	
Very General	+2
General	+1
Average	+0
Specific	-2
Very Specific	-4
Terrain	
Very Dense	-2
Dense	-1
Average	+0
Open	+1
Very Open	+2
Character has Bump Of Direction	+2

*: If characters have difficulty perceiving landmarks or pathways, perhaps due to fog, nighttime darkness, or Terrain modifiers, the GM can reduce or eliminate any bonus provided, or require characters to make a PER Roll to find the landmarks/path before they obtain the bonus.

BUYING NAVIGATION

Characters buy Navigation by categories, because knowing how to find one's way across uncharted lands does not necessarily mean knowing how to steer a sailing ship or plot the course of a starship. The first category a character buys costs 2 Character Points for a (9+(INT/5)) or less roll; subsequent types cost 1 point each. To improve the roll for all types of Navigation the character knows costs 2 Character Points per +1 to the roll. In most campaign settings the standard Navigation categories include:

Air, Land (also known as Orienteering), Marine, Space (sometimes called "Astrogation").

In some campaigns, additional, more exotic categories of Navigation are available, such as: Astral, Dimensional, Temporal, Urban

Each of these categories is discussed further below. The GM may add (or remove) categories as he sees fit. The Navigation Modifiers table lists some common modifiers applicable to most categories; the GM should adapt them as necessary to unusual forms of Navigation or special circumstances. Standard Complementary Skills for Navigation include Area or City Knowledges of the region the character's traveling through (or sometimes to) — though this mainly applies for "generic" AKs and CKs like AK: Deserts or AK: Forests, since if a character has an AK/CK of a specific area he doesn't usually need Navigation to find his way through it.

USING NAVIGATION

When on a trip, or just trying to get from Point A to Point B in unusual circumstances, a character typically makes one Navigation roll at the beginning (to ensure he gets off on the right heading), and periodically thereafter as the GM thinks necessary. How often a character should have to make Navigation rolls frequently depends on the circumstances. Staying on course to arrive at a distant mountain through the desert is easy because the character can keep his eye on the mountain and adjust his course, whereas trying to do the same thing through a jungle may mean the character has far more chances to go off-course. The GM should consider the length of the trip and the travel conditions and divide the journey up into one or more segments, each requiring a Navigation roll. Under "average" conditions, one roll every 30-50 miles probably suffices. At a minimum, one Navigation roll per day is appropriate; in confusing conditions, multiple daily rolls (even as many as one per hour) may be necessary.

If a character's Navigation roll succeeds, it means he's properly determined his location and/or can properly find his way on this trip (or this leg of the trip). If the roll fails, it typically means he realizes he doesn't know where he is or can't find his way: in other words, that he's lost. Since he knows this he can take steps to correct it, like backtracking to the last point where he *did* know his location and starting over. At the very least, he can re-orient himself by taking 1 Minute and succeeding with



another Navigation roll. A bad failure (by 4 or more) means the character's gotten off-course and doesn't know it; he's proceeding onward thinking he's on the right path. Only when confronted with unmistakeable evidence that he's gotten himself lost — like encountering a river he knows shouldn't be in his way — or when he succeeds with one of his later periodic Navigation rolls does he realize what's happened. As always, common sense should apply. For example, if the character can see the rising sun, he knows roughly which direction east is, no matter how badly he failed a Navigation roll. The GM may, at his option, impose penalties on later rolls to reflect how badly the character failed previous rolls... which in turn makes failure, and thus further penalties, more likely until the character becomes hopelessly lost.

Navigation can serve as a Complementary Skill for Shadowing in the environment in question, if the GM deems that appropriate.

Landmarks

The presence or absence of landmarks can help or hinder Navigation tremendously. Having a river to follow, a prominent mountain peak to sight on, or a series of constructed markers as a "silent guide" provides a bonus to the roll, while the absence of those things (such as trying to find one's way across the trackless desert or through the Endless Swamp of Many Giant Spiders) is much harder. (Since large bodies of water are almost always landmark-less, the GM shouldn't apply lack of landmark penalties to Navigation (Marine), but that form of the Skill still gets bonuses when landmarks, be they natural or man-made, exist.)

An appropriate Area Knowledge or City Knowledge of a location includes knowledge of the landmarks and acts as a Complementary Skill to Navigation (in fact, it can be so helpful that the GM may want to double the normal bonus from succeeding with a Complementary Skill Roll, or rule that no roll is necessary).

Navigation Target

If a character's trying to reach a defined target location, that can affect how easily he can use Navigation. General targets ("I want to get out of this forest" or "I want to reach the seashore") provide bonuses because success doesn't depend on precision — there's lots of seashore to find and many ways out of the forest, so to speak. More specific targets ("I want to find the witch's shack in the middle of the giant spider-filled swamp," "I want to find our way to that campsite we used last time we came through here") are much harder and impose penalties.

Planning Trips

A character can use Navigation to plan a journey that's optimal in some way — such as the fastest or most fuel-efficient route. This requires a Navigation roll at a -1 penalty. He still has to make Navigation rolls along the way to follow his planned route.

Navigation Based On Other Attributes

Exotic forms of Navigation (such as Astral, Dimensional, and Temporal) assume finding one's way depends on specialized knowledge or close observation — both the purview of INT. At the GM's option, mystical forms of Navigation may depend on other Characteristics. For instance, astral travel might depend entirely on force of will and fixity of purpose, and so Astral Navigation would be based on EGO. If movement between worlds depends on placating a gatekeeper spirit who sends travelers to the wrong place if he doesn't like their invocation, Dimensional Navigation might depend on PRE.

GENERAL NAVIGATION ABILITIES

Characters with the three main forms of Navigation — Land, Marine, and Air — all have certain abilities. Among other things, they can:

■ read and accurately interpret various types of maps associated with that type of Navigation.

■ determine which direction is which by orienting themselves using the sun and stars, and sometimes other simple methods

■ properly and accurately use a compass and other navigational gear (including the navigational equipment on an air- or watercraft they're in for Air and Marine Navigation, respectively)

■ find their way by *dead reckoning* (navigation by estimation of direction and distance traveled from a known point) if they don't have any equipment. This includes knowing all sorts of "tricks" and methods of interpreting their surroundings to learn which direction is which. For example, they know that in the northern hemisphere, the north side of a tree tends to have more moss than the south; in the southern hemisphere the opposite holds true. (Though some experts dispute the accuracy and usefulness of this trick.)

■ know how to give and read measurements and directions in common forms of navigational notation. For example, they can use the latitude and longitude system. Meridians of *longitude* run north-south. The meridian running through Greenwich, England is the prime meridian, or 0°; the meridian opposite it on the other side of the Earth (which corresponds in some places with the International Date Line) is the 180° meridian. Other degrees of longitudes of meridian run east and west, counting from 0 up to 180 (thus, there are 180 degrees of east longitude and 180 of west longitude, for a total of 360° around the globe). Each degree of longitude is further subdivided into 60 "minutes," with 60 "seconds" per minute, for greater precision of measurement. Parallels of *latitude* run east-west. The equator is 0°, with parallels counted north and south to the poles up to 90°, with further division into minutes and seconds as above. By combining a latitude and longitude measurement, one can designate (and thus find) a specific location on Earth. For example, one might refer to a position in the Middle East as 32° north latitude, 35° east longitude.

Characters with Navigation also know about other systems for indicating/measuring direction and distances, such as the UTM (Universal Transverse Mercator) grid coordinate system used by the military.

LAND NAVIGATION

Land Navigation, sometimes referred to as "orienteering" (though this can instead just mean "navigation as a sport"), is the most common form of the Skill in many campaigns. Characters use it to find their way across the land in the absence of roads, paths, or the like. This typically involves using a compass, but characters with Navigation (Land) can improvise tools to determine direction (such as the shadow-stick method of determining rough latitude and longitude based on the shadow cast by a stick stuck upright in the ground).

While other forms of Navigation almost always involve vehicles, Navigation (Land) could involve travel on foot or in a ground vehicle. If a character's primarily used to navigating on foot, he may suffer a small penalty (-1 to -2) if trying to navigate in a vehicle, especially one moving quickly; the same applies to a person used to vehicular navigation who finds himself having to walk. This penalty should diminish and then disappear quickly as the character becomes accustomed to his new circumstances.

Terrain

Dense terrain, such as many jungles, forests, and swamps, makes Navigation (Land) harder because the character can't see as far or get his bearings as easily. Open terrain, such as fields or deserts, makes it easier to perceive landmarks, the general lay of the land, and so forth, and thus eases the task of finding one's way.

AIR NAVIGATION

Navigation (Air) almost always involves maps (many types of aeronautical charts are available) and the navigational equipment in the aircraft. Lacking those tools, a pilot has to rely on dead reckoning (based on the position of sun, stars, and the like) or follow landmarks on the ground (a difficult thing to do at night [Sight PER Roll penalties apply to the Navigation roll], and impossible over the water).

MARINE NAVIGATION

Navigation (Marine) is in some ways the most difficult type of Navigation to use, since far out at sea a sailor has no landmarks he can rely on. Compass, sextant, and other tools become key, though celestial navigation (see below) can prove remarkably effective at times.

Characters with Navigation (Marine) can interpret the existence and movements of seabirds to find land. Birds remain fairly close to land (about 100 miles at most, for most species), so if a sailor sees them he knows land is nearby... and that he can follow the birds to it.

In some oceanfaring cultures, such as some Oceanic peoples, skilled navigators are said to have the ability to "read" the motions and shapes of waves far from land to determine the direction to land. This requires a Navigation (Marine) roll at -4.

Celestial Navigation

Celestial navigation is the art of navigating by the positions of the Sun, Moon, and stars. A character with Navigation (Marine) knows how to do it, and to some extent so may characters with other forms of Navigation.

Simple celestial navigation allows a character to ascertain his latitude by determining the declination (celestial latitude) of a star. This is easily established for a star directly overhead; for other stars, the navigator measures the angle between the star and the overhead (zenith) point using a tool called a quadrant. (An astrolabe, see below, could also be used.) Later navigators could use a sextant (see below) to determine both latitude and longitude. But of course, these methods only work at night, under a clear sky; bad weather thwarts them (so do rough waters, which make it impossible to hold steady long enough to get a good reading).

SPACE NAVIGATION

Known in some settings as "Astrogation," Navigation (Space) helps a character avoid getting lost in the icy depths of outer space. Since mankind has not traveled extensively in space, he hasn't had to create elaborate systems for navigating in space — a sometimes difficult task, since objects in space move instead of having absolute fixed positions like landmarks on land. The astrogation systems devised by Science Fiction writers in their stories include things like establishing a "galactic prime meridian" or calculating travel coordinates from pulsars (stars that emit regular, predictable radio waves and thus serve as "beacons").

ASTRAL NAVIGATION

"Astral planes" are spiritual realms that exist, invisible and intangible, alongside material reality. A mortal may enter an astral plane by separating his soul from his body (see *Astral Form* on page 54 of *The Ultimate Mystic*), in dreams or visions, or by magic. Some systems of mythology or occultism propose just one astral plane; other beliefs include several of these dimensions.

Accounts of astral planes generally agree, however, that normal conditions of space and speed don't apply in these spiritual realms. Astral travelers can move with immense speed, going anywhere in the world — or visiting realms beyond — in mere seconds. If you don't imagine a destination clearly, however, you may find yourself someplace you don't want to be, or completely lost.

Astral Navigation depends, therefore, on the ability to visualize a destination clearly, and keep your mind on that location. Strength of will can play a role in astral travel, too, so EGO Rolls are complementary with Astral Navigation. Astral Navigation rolls receive modifiers based on how well the character knows his destination, or possibly other connections to the character. For instance, a mystic might receive a small bonus when trying to reach the town where he was born, even if he barely remembers it, because he retains a mystical connection to the place.

DIMENSIONAL NAVIGATION

Fantasy stories, mythology, comic books, and Science Fiction novels provide many different descriptions of what travel to other dimensions is like. In some settings, characters reach other dimensions using fixed paths or portals, so navigation, as such, never becomes an issue. But in other settings, characters may travel freely between worlds, and need some way to know where they're going.

The *HERO System* assumes Extra-Dimensional Movement takes just a single Phase: a character disappears from one world and reappears in another. (The *Extra Time* Limitation may lengthen the process, of course.) In some settings movement between dimensions takes considerable time as a default; the GM establishes this as a campaign ground rule. For instance, a character might fly through a Limbo studded with portals to various worlds, or walk interdimensional roads. This does not fundamentally change the nature of Dimensional Navigation — either way, with a sufficiently bad failure a character doesn't know he's off course until he enters another dimension and discovers he's not where he wanted to go.

Exactly what cues a character follows in Dimensional Navigation depends on how the GM defines the nature of the Multiverse and Extra-Dimensional Movement. Travel to the proper location in a particular dimension may depend on visualizing the correct set of mystic symbols, following a strand of colored light through an immense and tangled web of similar strands, or listening for the proper chord in the music of the spheres. Dimensional Navigation may even be purely intuitive or, like Astral Navigation, involve keeping in mind a clear image of where you want to go.

Astral and Dimensional Navigation are distinct categories of Navigation. Characters use Dimensional Navigation to move *between* planes of existence; they may use Astral Navigation *within* a single mystical dimension. See Chapter Two of *The Ultimate Mystic* for more information on creating dimensions/multiverses and traveling between them, and *The Mystic World* for an example of a specific multiverse and how characters travel within it.

TEMPORAL NAVIGATION

Some characters can travel through time using astral projection, time machines, magic potions, spells, or other means. Time travelers may need Temporal Navigation to have any chance of reaching the correct time. Otherwise they could find themselves lost in the timestream, unable to reach their destination or reliably return home. (Of course, this may depend on how the GM defines time travel; see Chapter Nine of *Star Hero* for more information.)

Travel across greater spans of time generally imposes penalties on a Temporal Navigation roll: a cumulative -1 for every step down the Time Chart below 1 Day. However, characters suffer no penalty, and in fact receive a +3 bonus, for returning to their own time.

URBAN NAVIGATION

In some settings, particularly some Fantasy realms or Science Fiction planets, cities may all be designed along a common pattern: the temple is always *here,* the palace is always *there,* the Merchants' Quarter always occupies the southeast side of town, and so forth. In such settings, characters can buy Urban as a category of Navigation. Their familiarity with the standard city layout allows them to find their way through it easily (though not necessarily to find any given location), to find the best place for a good tavern or type of shop, to outrace a rival to a place in the city, or to lose pursuit in the twisty streets and alleys. City Knowledge of a given city is Complementary to Navigation (Urban) used in that city — in fact, characters with Navigation (Urban) usually have one or more corresponding CKs.

EQUIPMENT

Navigation assumes the character has no equipment — that he's finding his way using dead reckoning, celestial navigation, landmarks, intuition, or some other personal method — and thus suffers no penalty for lack of equipment. However, in most cases characters using Navigation can, and do, use appropriate equipment to make the task easier. Examples include:

■ *Maps:* Few things aid Navigation as much as an accurate map (+2 or greater bonuses to the roll). On the other hand, few things make it harder than an inaccurate one or one that's severely out of date (-2 or greater penalty).

■ *Compass:* Next to a map, a compass — a device that uses a magnetized needle (or needles) to point toward magnetic north, thus allowing the user to determine which direction he's currently moving in — is probably the most common navigational aid. In game terms it provides the *Bump Of Direction* Talent to the user, often greatly simplifying the task of finding one's way (+2 or greater bonus to appropriate rolls).

■ *Electronic Navigational Chart:* A "smart chart" that electronically integrates traditional paper navigational charts with other data, and that can tie into GPS (see below) and other sensors.

■ *GPS System:* Since the late twentieth century, people have been able to use the Global Positioning System — a group of satellites orbiting the Earth (or another planet, in a *Star Hero* game) — to navigate. Each satellite broadcasts its location above the Earth, and by triangulating that data, a GPS tracker can establish its own location on Earth with great precision. The first experimental GPS satellites were launched in 1978 and were based on earlier navigational technologies dating to the World War II period, but the system as a whole wasn't fully operational until 1994. In its early years GPS was a military asset, but it became available for free use by civilians a few years after full operational capacity.

As of the early twenty-first century, improvements to GPS technology allow the system to pinpoint a receiver's location to within two meters (1").



Over short distances Differential GPS is even more precise, measuring location to within 1 centimeter. In game terms this is the Enhanced Sense *Detect Exact Position On Earth* (using latitude, longitude, and altitude). Without a GPS tracking device, characters can't use this information; with one, they can use the Detect as a Complementary Skill Roll for Navigation (but usually with a minimum +2 bonus regardless of the roll). More advanced GPS devices (see page 387) are much easier for the average person to use (providing minimum bonuses of +3 or more).

■ *Astrolabe:* A device dating to at least the late BC era used to locate and predict the position of celestial bodies, and to determine local time at a given longitude (and vice-versa). It could also be used as a slightly less accurate version of a quadrant (see *Celestial Navigation,* above.) It functions as a Complementary Skill to the user's Navigation roll.

■ *Sextant:* Used on sailing ships, particularly during the Age of Sail, a sextant measures angular distances, thereby allowing a character with Navigation (Marine) to ascertain a ship's latitude and longitude. In game terms this is the Enhanced Sense *Detect Current Latitude And Longitude,* which functions as a Complementary Skill to the user's Navigation roll.

■ *Toleta:* Used on medieval sailing ships, this device is a pegboard used to mark the distance and direction traveled to assist in dead reckoning.

■ *Topofil:* A device that measures an unreeling thread to calculate distances from 0-5,000 meters. In game terms this is a Limited form of Absolute Range Sense.

Of course, all of these are devices known in the real world. In the fictional worlds of gaming, people may have invented similar devices for navigating space, dimensions, time, or the like.

If necessary a character with Navigation can construct simple (and much less accurate) versions of these tools with appropriate raw materials. For example, he can make a crude compass with a string, a piece of ferrous metal (such as a needle or razor blade), and some way to magnetize the metal (like repeatedly stroking it in the same direction with a piece of silk).

POWERS AND NAVIGATION

The Talent *Bump Of Direction* (and to some extent Absolute Range Sense as well) is very helpful to characters using Navigation; it typically provides a +2 bonus to rolls the character makes to ascertain direction or maintain travel in a given direction. Characters with Movement Powers that let them move long distances quickly often buy Enhanced Senses to help them navigate, such as an innate ability equivalent to GPS.

CONSEQUENCES OF FAILURE

The consequences of failing Navigation rolls is discussed above under *Using Navigation.*

BASE TIMES

In most cases, the Base Time for using Navigation to ascertain the direction or to determine if a character's moving in the desired direction is 1 Turn (though a quick check using dead reckoning methods and "tricks" may only require a Full Phase). Using the Skill to plan a trip in advance may require 5-20 Minutes or more, depending on the length of the trip and the potential obstacles characters can encounter. See above regarding the frequency of rolls.

UNIFYING NAVIGATION

Some campaigns don't worry too much about the minutia of how characters find their way from one place to another. In that case, the GM may find it simpler to combine all the forms of Navigation into one standard Intellect Skill that a character can use in any environment.

NAVIGATION BY GENRE

Navigation works the same in all genres and time periods, but the tools available to a navigator change considerably. The compass was invented in China in the fourth century AD. It's first mentioned in European writings in 1190, though it's unclear whether the Europeans independently invented it or it somehow traveled west from China. The sextant was invented in the early 1730s, though Martin Behain is known to have adapted the astrolabe for use as a tool to determine latitude in the 1490s. The GPS system became fully operational in 1994, and has been improved in the years since.

Prior to the modern day, maps weren't necessarily as accurate as the ones available in the early twenty-first century. Even through the Pulp era and beyond, maps often contained "white space" or lightly filled-in areas with little information, or were based on erroneous information... and maps from the Age of Exploration and before were often more fiction than fact!

Fantasy

In most Fantasy settings, characters can only buy the Land and Marine forms of Navigation, since air and space travel do not exist. Unless the setting has fairly sophisticated clocks, compasses, and similar devices, characters must typically rely on the stars and natural landmarks to find their way successfully. If they cannot see the stars due to cloudy weather, they should suffer a -3 (or greater) penalty to their rolls.

In games involving aerial vehicles or mounts, or planar travel, the Air and Dimensional versions of Navigation also become available. A flying character, or character who frequently uses flight spells, could also buy Navigation (Air).

Science Fiction

In a spacefaring campaign, Navigation (Space) is crucial, though other forms of Navigation may also be common if the PCs are explorers or the like.

At the GM's option, the existence of FTL travel, or particular methods of FTL travel, may require new Navigation subskills. Navigation (Hyperspace) allows a character to determine his position in hyperspace, both relative to other points in hyperspace and to normal space; if the environment of hyperspace is sufficiently weird and unlike normal space, GMs may opt to make this an entirely separate Skill. Navigation (FTL) allows a character to determine his position while whipping along at FTL speeds, and involves compensating for redshift, light lag, and the movement of objects throughout the Galaxy.

Time and interdimensional travel allow travel in two entirely new ways, and consequently require two new subskills. Navigation (Time) allows a character to determine where in the past or future he is. Knowledge and Science Skills such as History, Astronomy, Archaeology, and possibly Anthropology serve as Complementary Skills. Navigation (Dimensional) allows a character to determine his location among the dimensions of the multiverse. It may be the same as Navigation (Hyperspace) if all dimensions open onto the same hyperspace.

ORATORY

Type: Interaction Skill (roll: 9 + (PRE/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

A character with Oratory has the ability to speak to an audience and to deliver a convincing presentation. With well-crafted words, careful phrasing, proper voice modulation and intonation, and the right body language, he can address an audience and make it receptive to his message — or even sway the crowd to his point of view. He also knows how to read an audience to determine its mood, write good speeches, speak extemporaneously (without a prepared speech or notes), and rally troops with his inspirational words.

Oratory does *not* allow characters to argue, participate in back-and-forth debates, or lie convincingly — those are functions of Persuasion (*q.v.*). It's only useful when the character's the only person talking and the audience isn't responding.

For game purposes, the "audience" necessary for Oratory usually means at least a dozen people, and usually more — up to thousands or millions in some cases. The character doesn't necessarily have to be in their presence (he could broadcast his message by radio, television, or the like), but in that case usually suffers a -2 to his roll to represent the diminished impact that comes from not being there himself.

Using Oratory

Oratory has three primary uses: speaking convincingly to an audience (including preparing a speech); reading the crowd's reaction; and creating rallying cries.

SPEAKING CONVINCINGLY

The main function of Oratory is that it allows a character to speak to an audience and convince them that his expressed opinions are worthy of consideration, perhaps even wholehearted belief. After spending the necessary Base Time (see below), the character makes an Oratory roll. If he succeeds, he's held the audience's attention and convinced its members to think about what he was saying. If the roll succeeds by four or more, the character convinces the members of the audience (or at least the vast majority of them) to agree with his line of reasoning (a skilled speaker can be very convincing). If he makes the roll by half or a Critical Success, he turns the audience members (or at least most of them) into fanatical believers in his cause.

The standard rules for resisting Interaction Skills and for the duration of Interaction Skills apply to this use of Oratory. A skilled speaker can sway peoples' hearts and minds for a long time after he speaks (perhaps permanently), but some listeners shake off a speaker's effects after being out of his presence for a while.

If an Oratory roll fails, it typically means the audience members ignore the speaker's efforts to convince them — they remain neutral or hostile to his message. If the roll fails badly (by 4 or more), the audience may disagree with the character so strongly that it leaves in disgust, throws things at him, or even attacks him.

Speechwriting

The rules for Oratory assume that a character using it is speaking more or less extemporaneously — *i.e.,* without significant prior preparation, or even off the top of his head. That's part of what the Skill gives the character: the ability to speak well to an audience even in difficult circumstances. However, characters with Oratory also know how to prepare good speeches. If a character has time to prepare a speech beforehand, he can make an Oratory roll to determine the quality of the speech. That result serves as a Complementary Skill Roll for his later roll to convince the audience. If this roll fails, the character realizes his speech isn't that good (it's not necessarily bad, just not noteworthy). If it fails badly (by 4 or more), he *thinks* the speech is really good when in fact it's awful; the discord this creates imposes a -2 penalty on his roll when actually using the speech.

Presence Attacks On Groups

Oratory helps characters make effective Presence Attacks on large groups. If the character succeeds with an Oratory roll, add +1d6 to the Presence attack. If the character succeeds with a half roll, add +2d6.

GAUGING THE AUDIENCE

One of the ways a character with Oratory convinces his audience is by "reading" the audience's mood and tailoring his words to suit. At the halfway point through the Base Time for a speech, a character using Oratory may make a separate Oratory roll to judge the audience's reaction so far. If the roll succeeds, he adjusts his remarks to suit; the roll serves as a Complementary Skill Roll for his later roll to convince the audience. (This assumes the audience doesn't strongly disagree with him and that he's willing to make minor changes; if neither holds true, this roll has no effect.) If the roll fails, he can't get a reading on the crowd; if it fails badly (by 4 or more) he misreads the crowd, resulting in a -2 penalty on his final roll to convince its members.

RALLYING CRIES

With the GM's permission, characters involved in large-scale battles can use Oratory to make *rallying cries* to inspire the troops and improve morale. The character takes a Full Phase and makes his Oratory roll, receiving a bonus if he roleplays the attempt to rally the troops effectively but usually suffering the penalty for "noisy environment." If the roll succeeds, it can have one of the following effects, chosen by the character (see the Mass Combat rules on pages 200-18 of *Fantasy Hero* for more information on unit combat):

■ for every 2 points by which the character's roll succeeds, his unit receives +1 on Morale rolls for its next two Phases (see also the rules for Inspiration on page 208 of *Fantasy Hero,* which use Oratory in a similar way; characters cannot use both methods at once)

■ his unit receives +1 OCV for its next Phase (or +2



if the character rolls a Critical Success)

■ for every point by which the character's roll succeeds, his unit receives +1 on its next Post-Segment 12 rallying roll, provided this roll takes place within 4 Segments of the rallying cry

If desired, the GM can also allow characters to use these rules for smaller-scale battles — in other words, the sort of fights a group of PCs gets involved in frequently — but he should be wary of game balance problems. In this case a character who uses a Full Phase Action and succeeds with an Oratory roll to make a rallying cry grants everyone on his side (*i.e.,* the other PCs, and perhaps some NPCs) a +1 OCV on their next Phase.

ORATORY MODIFIERS

Like other Interaction Skills, Oratory often receives modifiers based on the circumstances, the attitude of the "target" (in this case, the audience), and similar factors. Besides the specific ones mentioned above, general modifiers (which are summarized in the Oratory Modifiers table) include:

■ *Audience Quality:* An attentive or appreciative audience makes Oratory easier; a skeptical or hostile one makes it harder.

ORATORY MODIFIERS TABLE

Audience Quality	Modifier
Very Receptive/Appreciative	+2 to +3
Receptive/Appreciative	+1
Neutral	+0
Hostile/Skeptical	-1 to -2
Very Hostile/Skeptical	-3
Other Factors	**Modifier**
Noisy surroundings	-1 to -3
Poor voice	-1 to -3

■ *Noise:* The noisier it is, the harder it is for the character to make himself heard and listened to.

■ *Poor Voice:* If illness or some other problem affects the character's voice, his speech tends to be less convincing.

EQUIPMENT

Oratory doesn't involve equipment; it's a purely personal Skill.

POWERS AND ORATORY

Images to the Hearing Group used to amplify a character's voice, or possibly even to improve its tone, could help with Oratory immensely, perhaps providing a bonus of +1 to +2.

CONSEQUENCES OF FAILURE

The consequences of failing Oratory rolls are discussed above.

BASE TIMES

Oratory's Base Time depends on the length of the speech being given. Typically the sorts of speaking that involve Oratory require at least 5 Minutes, and much longer times (up to hours) aren't out of the question for some times, places, and topics. Making a rallying cry takes a Full Phase.

SUBDIVIDING ORATORY

Oratory is already a Skill of fairly restricted scope, so there's probably no reason to split it into multiple Skills. At most a GM might sever the speechwriting function into a distinct Professional Skill, and in games that emphasize mass combat change the "rallying cry" function into its own Interaction Skill, *Rally.*

ORATORY BY GENRE

Oratory functions the same way in all genres and periods.

PARAMEDICS

Type: Intellect Skill (roll: 9 + (INT/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

Characters with this Intellect Skill can perform first aid, stop bleeding, heal or patch up injuries, and generally keep someone alive — what's often referred to as "trauma care." They can also handle other relatively minor medical matters, such as setting broken bones, delivering babies, and administering medications via an intravenous drip. They know about the equipment needed to provide this sort of medical care, how to use it, and its effects on patients. If appropriate, they're at least vaguely familiar with local medical resources and the local medical community (hospitals, other care centers, prominent physicians, and the like).

Paramedics is an Everyman Skill for all genres.

Using Paramedics

Paramedics has three primary uses: providing basic medical care and healing minor injuries; stopping bleeding and preventing death; and treating other medical conditions.

BASIC MEDICAL CARE; HEALING MINOR INJURIES

Characters can use Paramedics to provide care for and treatment of typical combat injuries (in game terms, for the loss of BODY) and other types of wounds — they can alleviate (to a minor degree) the effects of an injury, prevent infection, and put the victim on the road to a full recovery. This typically has a Base Time of 1 Turn, and penalties for the degree of injury (see below) apply. If the character's roll succeeds, he patches up the injury as best he can; at the GM's option, the injured character immediately gets 1 BODY back. (Thus, Paramedics can heal the most minor of wounds, but anything worse requires more advanced medical care and time.) Also at the GM's option, if the character achieves a Critical Success, he heals 2 BODY instead. If the roll fails, the character is unable to treat the wound for some reason; if it fails badly (by 4 or more), he's made the problem worse, inflicting another 1 BODY damage on the subject.

Typically characters can use Paramedics *per wound,* thus possibly healing a person for more than 1 BODY if that person's suffered multiple wounds. This also makes Paramedics easier, since the penalty depends on the BODY loss from the wound being treated, not the character's overall BODY loss. However, the GM may prefer to lump all the BODY together to determine the penalty, and/or restrict a character with Paramedics to healing just 1 BODY regardless of the number of wounds suffered.

STOPPING BLEEDING AND PREVENTING DEATH

A character at zero BODY is dying (see *Death,* page 413 of *The HERO System 5th Edition, Revised*). He loses 1 BODY at the end of each Turn until he dies (this is usually referred to as "bleeding to death" even if blood loss isn't literally involved). If the character takes a Full Phase and succeeds with a Paramedics roll (the penalty for degree of injury applies), he stops the bleeding, stabilizing the character at his current negative BODY total. If he achieves a Critical Success, at the GM's option he also provides 1 BODY of healing. If the roll fails, the subject continues to bleed; if it fails badly (by 4 or more), the character has made the problem worse, inflicting another 1 BODY damage on the subject and hastening his oncoming death.

TREATING OTHER MEDICAL CONDITIONS

Characters can also use Paramedics to treat other medical conditions and provide other types of basic medical care. As indicated by the accompanying table, these tasks fall into three categories: Routine (easy tasks that usually have a +1 to +2 bonus, or at least no penalty); Standard (basic tasks that usually receive a -0 or -1 penalty); and Advanced (difficult tasks that suffer a -2 or greater penalty). Typically the Base Time for a Routine or Standard task is 1 Turn to 1 Minute; Advanced tasks and a few other types of tasks rise to 5 Minutes or more.

EMERGENCY MEDICAL TECHNICIANS, PARAMEDICS, AND DOCTORS

In the real world in the United States, there are several different professionals who can provide trauma care and related medical assistance. The first is the *Emergency Medical Technician* (EMT), who's trained to "bandage and bundle" (or "package," in EMT jargon) patients so they can be transported to more advanced medical care. They can provide CPR, but they're not authorized for invasive medical techniques, not even administering a painkiller shot or starting an IV. Their job is to get an injured or sick person to other medical personnel as quickly as possible.

A *Paramedic* has much more advanced training, comparable to that of a Registered Nurse according to some authorities. In addition to EMT-style care, they can deliver babies, administer emergency drugs, intubate patients who are having difficulty breathing, monitor and initiate electrical stimulation of the heart, and so forth. This is the level of care the *Paramedics* Skill allows a character to provide.

At the upper end of the medical care food chain is the *Doctor,* or physician, who's legally allowed to provide all types of medical care. A character with Paramedics isn't necessarily a doctor. To be a licensed doctor, a character must also buy SS: Medicine (and many have other health science SSs as well) and Fringe Benefit: License To Practice Medicine. Furthermore, a character with Paramedics can only provide immediate, emergency care; the Skill doesn't involve the long-term care and cures, intensive therapy, or invasive surgical procedures doctors perform. Almost all medical doctors have Paramedics, but not every character who has Paramedics is a doctor.

PARAMEDICS TASKS

In addition to treating wounds and preventing characters from bleeding to death, here are some of the types of medical treatment a character can provide with Paramedics.

Routine Tasks	Modifier
Simple splinting of non-deformed broken bones	+2
Treat accidental amputation	+2
Simple IV insertion	+1
Treat simple poisoning (bee stings and the like)	+2
Standard Tasks	**Modifier**
CPR, Advanced Cardiac Life Support	-0
Intubate patient having trouble breathing	-0
Operate defibrillator (heart-shocking machine)	-0
Extricate injured person from vehicle/building	-0
Treat allergic reactions	-0
Stabilize spinal/neck injuries	-0
Treat serious poisoning (*e.g.,* rattlesnake bite)	-1
Advanced Tasks	**Modifier**
Fix joint dislocation	-2
Splint deformed broken bone	-2
Treat drowning	-2
Intraosseous IV insertion	-2
Deliver baby	-2 to -3
Treat deflated lung	-4
Treat severe poisoning (*e.g.,* hazardous materials exposure)	-3 to -4
Treat penetrating eye injury	-5
Treat pericardiocentesis (bleeding in sack around heart)	-5
Resuscitate child	-6
Stabilize head trauma	-6

PARAMEDICS MODIFIERS

Some of the standard modifiers that apply to Paramedics rolls include:

Degree Of Injury

First and foremost, using Paramedics to treat wounds suffers a penalty based on the degree of injury — in game terms, based on how much BODY damage the subject's taken. The typical penalty is -1 for every 2 BODY damage taken. (For stopping someone from bleeding to death, the GM may prefer to base the penalty only on the amount of BODY the character has lost below 0.) This penalty works best for more "realistic" campaigns; in cinematic campaigns, GMs may prefer to substitute the less harsh "damage to subject" general modifier (page 33). For greater realism, the GM can also apply the "significant damage" additional modifier from those rules to this Paramedics modifier.

Other Races And Species

Many campaigns, including most High Fantasy and Space Opera games, feature multiple sentient species, such as Dwarves, Elves, and Martians. When a character uses Paramedics on a species other than his own, he may incur a penalty of -1 to -3, depending on how different the race is. (See also *Alien Physiology* on page 64 of *Star Hero.*) For example, if Chiron (a human thief in a Fantasy campaign) tried to save a dwarf from dying, the GM might impose a -1 on his roll. Characters with an appropriate Background Skill (like SS: Dwarven Anatomy) don't suffer these penalties in situations covered by that Skill.

Characters trained in normal human Paramedics (or similar Skills, such as SS: Medicine) can apply their learning to animals at a -4 penalty. At the GM's option, a character can redefine Paramedics as *Veterinary Medicine,* which allows him to treat animals normally and humans at a -4 penalty.

EQUIPMENT

The *Paramedics* Skill generally requires equipment — EMTs and Paramedics carry a "Jump-Box," a large container filled with various medical supplies. A character lacking this often can't do much more than control non-severe bleeding and provide other very simple forms of care — the GM should enforce the standard "lack of equipment" modifiers as appropriate.

POWERS AND PARAMEDICS

When applied to BODY and/or STUN, the *Healing* Power makes most uses of Paramedics superfluous. However, Healing doesn't allow a character to do things like deliver babies or administer drugs via IV, so it's not a perfect substitute.

CONSEQUENCES OF FAILURE

The consequences of failing a Paramedics roll for specific tasks are discussed above. Typically a failed roll means the character cannot provide the type of medical care required, or has somehow been unable to make the care he provided do what it's intended to. A badly-failed roll (by 4 or more) actually makes the condition worse, inflicting additional BODY damage or the like.

BASE TIMES

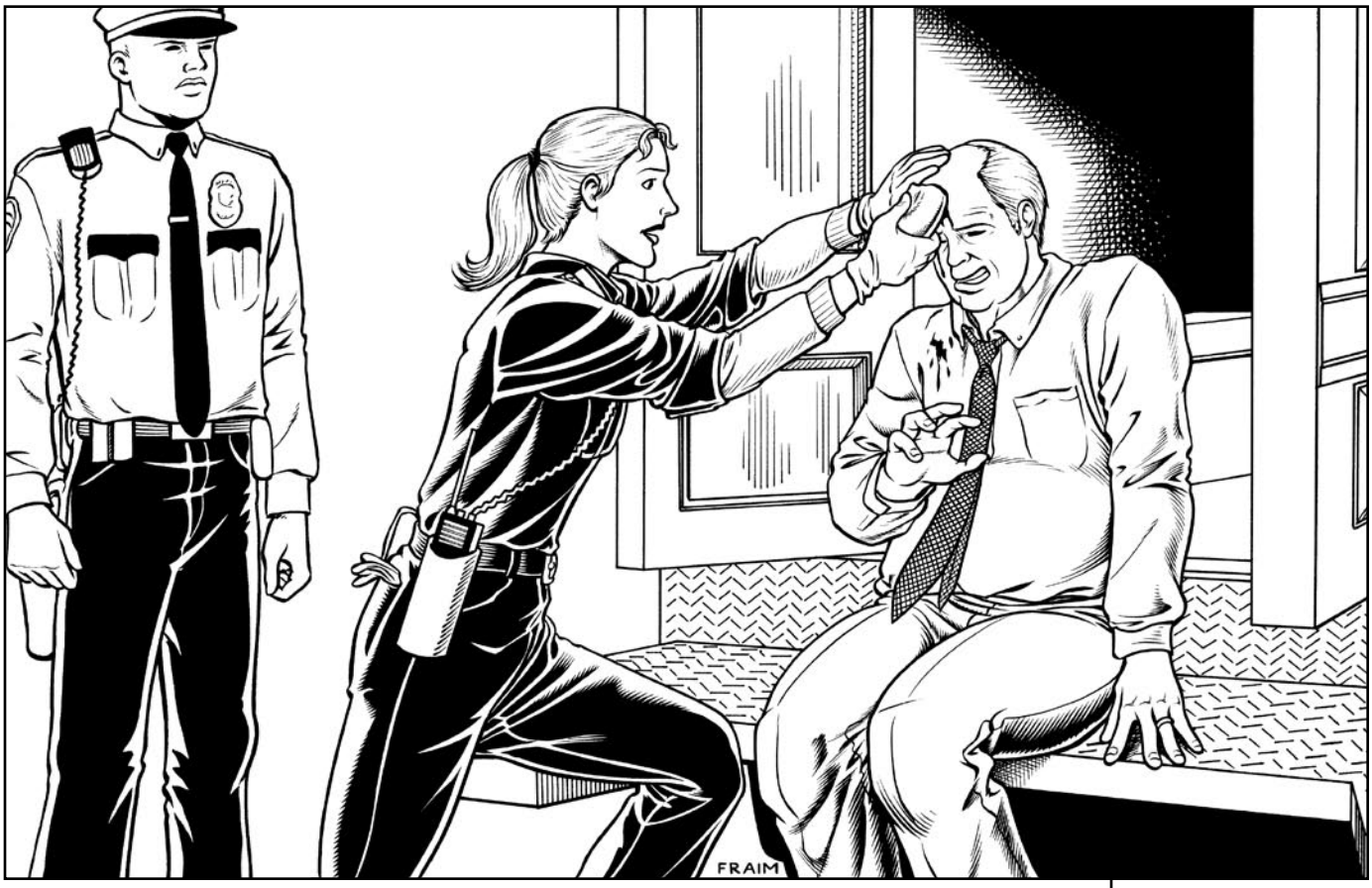
The Base Times for typical Paramedics tasks are listed above. Other than stopping bleeding (which requires just a Full Phase), most start at 1 Turn and go up from there based on the complexity and difficulty of the task.

SUBDIVIDING PARAMEDICS

In campaigns featuring a large number of sentient species or races, the GM might require characters to buy Paramedics by species/race: the first costs 2 Character Points for an INT-Based Roll; each additional one costs +2 Character Points (or only +1, if the GM prefers). A character can use his Paramedics on a race/species he hasn't purchased at a -3 penalty.

PARAMEDICS BY GENRE

Paramedics works the same from genre to genre and era to era in that it always allows a character to provide trauma medical care. What changes is the amount or types of medical knowledge available. A modern-day character knows a lot more about how to treat injuries and the like than a Fantasy-era character (or even a Pulp-era character), but his knowledge in turn may be dwarfed by that of a Future-era character. The rules above generally assume at least a modern level of knowledge; the GM may restrict what characters from earlier time periods or genres can do with Paramedics.



Fantasy

Healer, the Fantasy version of Paramedics, allows characters to perform the basic medical chores associated with Paramedics. When treated as a "scientific" discipline, it may be known as *Chirurgeon* instead. In most Fantasy societies, there is no formal training for doctors, so a character with this Skill *is,* in effect, a doctor — someone the community looks to for healing and medicines.

Healing includes some knowledge of folk remedies and herbalism as well as medical procedures for repairing wounds and so forth. In some settings, this Skill may also involve the use of minor healing magics: ritual chants, hedge magic-type spells, potion-like poultices, and so forth. If so, these are a function of the Skill roll; the character is not required to buy any spells in addition to Healing.

Realistically, Fantasy-era medicine is spotty at best. Some is comparatively good — according to some sources, Roman military surgeons had formalized training that allowed them to practice better medicine than that used in the American Civil War in some respects. But for the most part, while healers and chirurgeons could perform some basic tasks (treating minor illnesses, setting broken bones, stitching up light wounds), much of their "science" was based on utterly incorrect notions of how the body worked, what caused (and cured) diseases, and so forth. In many cases, the "treatments" involved were either completely ineffectual, or did far more harm to the patient than good. As a result, almost anyone who suffered a serious wound, or contracted a serious illness, was as good as dead — it just took a few hours or days for him to die.

But of course, many *Fantasy Hero* games aren't all that realistic. In the interest of drama and adventure, it's perfectly appropriate to let characters use Healing to effect minor "repairs" as discussed above. This includes preventing infection, something medieval medicine was often quite poor at. After all, it's not very heroic to be laid low by gangrene and fever instead of the swords of one's enemies or the fire of a dragon!

Science Fiction

In Future settings, advanced medical technology, operable by anyone, may make this Skill obsolete. There's no need for anyone to learn emergency medical care when the Superdoc 3000 fits in one's pocket and can treat even near-fatal wounds almost instantly.

Some aliens have such unusual physiologies that characters suffer severe Paramedics penalties when trying to treat them. See the *Alien Physiology* Physical Limitation on page 64 of *Star Hero* for details.

Superheroes

In a superhero setting, with its bizarre superscience and weird mix of all possible types of characters, a PC with Paramedics may encounter all sorts of unusual problems. How do you give a shot to a character with super-dense skin that can bounce bullets? How do you provide IV drugs to a character who doesn't have a standard circulatory system? Typically characters get around these difficulties by using super-medical science to create medical tools specifically for use on superhumans (such as ultrasharp questionite needles that can penetrate even Grond's skin), but the GM may impose penalties of -1 to -3 based on the circumstances, the victim's unusual physiology, and so forth.

PENALTY SKILL LEVELS

Type: Combat Skill (roll: N/A)
Cost: 1½-3 Character Points per Level (see text)

Penalty Skill Levels (PSLs) are a type of Skill Level that only reduce or counteract a specific type of negative OCV modifier for making particular types of attacks. Examples include Range Skill Levels (RSLs, which offset the Range Modifier) and Targeting Skill Levels (which offset the penalty for targeting Hit Locations); see below for more information and further examples.

Penalty Skill Levels are an excellent way to represent a character's skill with a specific type of attack (or category of attacks) without simply increasing his overall OCV (which may have game balance consequences). A few Targeting Skill Levels, Range Skill Levels, or other PSLs can add distinctiveness and flavor to a character's combat style as well — though the GM should be wary of letting a character buy too many of them (especially Targeting Skill Levels), lest they make the character unbalancingly effective.

BUYING PENALTY SKILL LEVELS

To determine the cost of a Penalty Skill Level, consult the Penalty Skill Level Table. A character cannot buy "generic" PSLs that apply to more than one negative OCV modifier; he must specify which penalty a PSL applies against when he buys it.

Characters cannot buy Penalty Skill Levels to counteract the standard OCV penalty imposed by a Combat Maneuver, such as the -3 OCV for a Grab By. If a character wants to buy PSLs with an attack, he must define some form of negative OCV modifier they counteract — such as the Range Modifier or Hit Location modifiers. If he wants to counteract the OCV penalty associated with a Combat Maneuver, he should buy 2-point Combat Skill Levels with that Maneuver.

Characters cannot buy Penalty Skill Levels to counteract the "Unfamiliar Weapon" penalty. That would effectively give them Weapon Familiarity with all weapons for only 9 Character Points. Except as noted below, they also should not buy them to counteract Autofire-related penalties; that's what Autofire Skills are for.

If a character purchases PSLs, he cannot later spend Experience Points to "upgrade" the PSLs to Combat Skill Levels — the two are distinct Skills. But of course, the GM could permit this if he felt it wasn't abusive, was within character conception, made sense from a story development point of view, and so on.

USING PENALTY SKILL LEVELS

A character cannot use PSLs to increase OCV generally, to increase the damage an attack does, or to increase DCV (but see below). He can only use them to reduce or counteract a specific type of negative OCV modifier, defined when he buys the Skill.

Example: *Randall Irons wants to be exceptionally good at shooting distant targets with pistols (to reflect his steady hand). He buys some Range Skill Levels. The cost for a +1 RSL with Pistols is 2 points. Randall spends 6 Character Points and receives a +3 to his OCV when using Pistols — only to offset Range Modifiers.*

Later, Randall's in a gunfight at a range of 9". This would normally be a -2 to his OCV, but because he has the RSLs, Randall suffers no penalty. However, he receives no direct bonus to his OCV, regardless of how close his opponent gets.

A character can change how his PSLs are assigned as a Zero Phase Action. However, unless the GM permits otherwise, he may not change the assignment of his PSLs more than once in a Phase.

Limited Penalty Skill Levels

The smallest PSL that can have a Limitation is a 3-point Level. This corresponds to the 5-point CSL. Thus, if a character wants to create a gun that's accurate at great distances, he'd buy a 3-point Range Skill Level with the Limitation *Obvious Accessible Focus* (-1).

Because the rules don't allow characters to put Limitations on Penalty Skill Levels costing less than 3 points apiece, a character may find himself in a situation where it costs more to buy Limited PSLs with a particular attack than it would if he just bought less expensive PSLs — even though the cheaper PSLs are *less* restricted. In that case, the GM may, at his option, allow the character to buy the less expensive PSLs and treat them as if they were Limited, without actually applying the Limitation to them.

Negative Penalty Skill Levels

Certain powers or abilities, such as some curses in Fantasy games, involve making a character less capable in combat — in short, they apply negative PSLs to him. At the GM's discretion, a character may increase a specific negative OCV penalty a target suffers (for example, increase the Range Modifier for his attacks) for 3 points. This increase in the penalty applies for all purposes, not just for a single attack or against the character who imposes the NPSL. This "Power" is No Range, Constant, and costs END; using it to affect the target requires an Attack Roll. Each point of Power Defense negates one Negative CSL, Negative Penalty Skill Level, or Negative Skill Level.

Penalty Skill Levels For DCV And Skills

At the GM's option, characters can buy PSLs to counteract DCV penalties in very specific circumstances (for example, the *Environmental Movement* Talent is built this way, as are some Talents in Chapter One of this book). However, this should be

PENALTY SKILL LEVEL TABLE

Cost	Application
1½	+1 to offset a specific negative OCV modifier with any single attack
2	+1 to offset a specific negative OCV modifier with any three maneuvers or tight group (*e.g.,* +1 vs. Range With Pistols)
3	+1 to offset a specific negative OCV modifier with all attacks

If a character buys an odd number of 1½-point PSLs, the cost for the final one rounds up to 2 Character Points; the character doesn't get it for the discount cost of 1 point. The GM may, in his discretion, allow a character with two different types of PSLs that end in halves to combine them to avoid this.

rare and the GM should make sure "defensive PSLs" don't unbalance the campaign.

Similarly, the GM might allow characters to buy PSLs to counteract a specific type of penalty to the roll with a specific Skill — for example, PSLs with Paramedics to counteract the penalties imposed by the size of the wound being treated. See the Optional Penalty Skill Levels Versus Skill Penalties table for details.

In either case, the player and GM should work together to determine which cost category of PSL is most appropriate.

TYPES OF PENALTY SKILL LEVELS

Some of the most common types of PSLs characters can buy (though not necessarily the only ones) include:

Encumbrance Skill Levels

These PSLs offset the Agility Skill penalty caused by encumbrance. A character with Encumbrance Skill Levels can function just as well when weighed down as he can when carrying nothing. (This assumes the GM allows PSLs to apply to DCV and Skill penalties.)

Environment Skill Levels

Characters can't buy one type of Penalty Skill Level to cancel any and all Environmental Conditions modifiers, but they can buy forms of the *Environmental Movement* Talent (which is built using PSLs) to counteract specific environmental penalties (such as for fighting underwater or for fighting while intoxicated).

Equipment Skill Levels

With the GM's permission, characters can buy PSLs to reduce the penalty imposed by lack of equipment or using improvised equipment. Rarely, if ever, should characters be allowed to buy enough of these PSLs to *eliminate* the lack of proper equipment penalty, but reducing that penalty a little is appropriate for many characters. (This assumes the GM allows PSLs to apply to Skill penalties.)

Hurried Skill Levels

Characters who want to be able to perform a particular Skill (or group of Skills) quickly without problem can buy Hurried Skill Levels, which offset the penalty for attempting a task in less than its defined Base Time (see page 23). (This assumes the GM allows PSLs to apply to Skill penalties.)

Injury Skill Levels

Characters use this type of PSL to offset the Skill Roll penalty for being injured. (This assumes the GM allows PSLs to apply to Skill penalties.)

Multiple Block Skill Levels

These PSLs offset the OCV penalty characters suffer for making additional Blocks after the first. They apply only to Block, not to Missile Deflection.

Range Skill Levels

The most popular form of PSL is the *Range Skill Level* (RSL), which offsets the Range Modifier (see page 373 of *The HERO System 5th Edition, Revised*). An RSL has no value when a character attacks at a range of 4" or less (since the Range Modifier up to that point is -0).



OPTIONAL PENALTY SKILL LEVELS VERSUS SKILL PENALTIES

Cost	Application
1½	+1 to offset a specific penalty with one Skill
2	+1 to offset a specific penalty with a tight group of any three Skills
3	+1 to offset a specific penalty with a broad group of Skills, such as all Interaction Skills or all Agility Skills

Recoil Skill Levels

In campaigns using the Recoil rules (see *Dark Champions,* page 194), characters can buy Penalty Skill Levels to counteract the Recoil penalty. Recoil Skill Levels help to counteract the OCV penalty for Autofire, Rapid Fire, or Multifire against a single target (they have no effect when the character makes multiple shots against multiple targets). Because they're PSLs, Recoil Skill Levels don't improve the character's OCV until after his first shot against a single target — all they can do is counteract some or all of the OCV penalty for Recoil.

Riding Skill Levels

Most commonly purchased in Fantasy campaigns, Riding Skill Levels halve or remove the -2 OCV penalty for fighting while on horseback (griffinback, dragonback, spiderback, wolfback, giant eagle-back...).

Size Skill Levels

Size Skill Levels counteract the penalties for attacking targets that are smaller than human size. This generally only applies to objects, since small characters should buy DCV Levels to represent their size rather than using the Target Size rules. However, the GM may allow a character to use a number of Size Skill Levels equal to the target's purchased DCV Levels based on size.

Targeting Skill Levels

Targeting Skill Levels counteract the penalty for targeting Hit Locations. They apply to any and all Hit Location penalties. Three Targeting Skill Levels ensure that a character can always strike his opponent's chest, yielding average STUN damage with Killing Damage weapons. At the GM's option, they might also apply to counteract (or at least reduce) the OCV penalty for attacking targets smaller than human size (see *The HERO System 5th Edition, Revised,* pages 375, 382).

Throwing Skill Levels

Throwing Skill Levels offset the penalties for throwing unbalanced or unaerodynamic objects.

EQUIPMENT

Penalty Skill Levels don't involve equipment; they're a purely personal Skill. Characters can buy them with Limitations like *Focus* (see above) to build a piece of equipment that provides them, but this is rare.

POWERS AND PENALTY SKILL LEVELS

Characters can buy PSLs to counteract the OECV penalty for Mind Scanning a large group. They can also buy Multiple Deflection PSLs to offset the penalty for Deflecting multiple attacks (similar to Multiple Block PSLs, above). Characters cannot buy PSLs to counteract the penalty for trying to Find Weakness in a target multiple times.

BASE TIMES

A character can change how his PSLs are assigned as a Zero Phase Action. However, unless the GM permits otherwise, he may not change the assignment of his PSLs more than once in a Phase.

PENALTY SKILL LEVELS BY GENRE

Penalty Skill Levels work the same in all genres.

PERSUASION

Type: Interaction Skill (roll: 9 + (PRE/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

Characters with this Interaction Skill can convince, persuade, and/or influence individuals. They can also tell believable lies and argue/debate convincingly.

USING PERSUASION

The general rules for Interaction Skills (page 64) apply to Persuasion, including rules about using the Skill on PCs, how targets resist the Skill, and the duration of the effect.

Typically characters cannot use Persuasion to accomplish something more directly covered by another Interaction Skill. For example, they can't persuade someone to reveal information by talking to them casually (that's Conversation) or use it to persuade someone to become friendly toward them (that's Seduction). However, Persuasion often serves as a Complementary Skill to those Skills.

The more outrageous and unbelievable the lie or advocated position is, the more negative modifiers the GM should impose on the Persuasion roll (or bonuses he should give to the EGO Roll to resist). Persuasion can be highly effective, especially in the right situations, but it's not Mind Control. If a character makes a ridiculous suggestion using Persuasion, hefty penalties should apply to his roll — and the GM should always keep common sense and dramatic sense in mind when adjudicating the results.

Telling Lies

One function of Persuasion is to tell believable lies. A character with Persuasion can look someone straight in the eye and tell a blatant falsehood without so much as appearing nervous. The more outrageous the lie, the bigger the penalty the GM should impose, but routine lies typically suffer no penalty (and may even receive a small bonus if the character takes pains to make them seem convincing). Acting serves as a Complementary Skill for this use of Persuasion. If the target's ability to see through the lie depends on logic, intelligence, or the like, the GM may let the target make his resistance roll using INT or Deduction instead of EGO. Alternately, because Persuasion makes a character good at lying, it may also give him the insight needed to figure out when someone's lying to him, and thus serve as the resistance roll.

Arguing And Debating

Characters can use Persuasion to try to convince another person via argument or debate. This involves a Persuasion Versus Persuasion Contest, with the winner either (a) convincing the other person he's right, or (b) causing the other character to back down or leave the argument.

Taunting

At the GM's option, a character can use Persuasion in combat to taunt a foe into making a hasty attack. This requires a Half Phase Action and typically only works once per combat, though the GM may allow multiple uses against targets who

are particularly susceptible to this sort of thing due to Psychological Limitations and the like. (Taunting automatically requires the target to roll against his Enraged for conditions like "Enraged in combat" or "Enraged when insulted.")

If the character's Persuasion roll succeeds, the target makes his opposed roll using EGO. If he fails, he attacks the character with his next Phase (moving toward him to do so if necessary) and suffers a -1 OCV because he's attacking hastily out of rage. If the target of a taunt is already fighting someone else, he should receive a bonus of +2 or more to his EGO Roll to resist. It's a lot harder to taunt someone into turning on a foe (and thus exposing himself) than it is to affect someone not already in combat or who's already fighting the character taunting him.

Modifiers

In addition to the general Interaction Skill modifiers discussed earlier in this chapter, some possible modifiers for Persuasion include:

■ *Gullibility:* for whatever reason, the target really wants to believe the character: +3 to the Persuasion roll (or -3 to the EGO Roll)

■ *Wary:* the target is skeptical or suspicious: -1 to -5 to the Persuasion roll (or +1 to +5 to the EGO Roll)

EQUIPMENT

Persuasion doesn't involve equipment; it's a purely personal Skill.

POWERS AND PERSUASION

Mind Control usually renders Persuasion unnecessary, though Persuasion sometimes has the benefit of subtlety. Characters who've been Mind Controlled usually realize what was done to them sooner or later, whereas characters who've been Persuaded may spend the rest of their lives thinking they came to "the right conclusion" on their own.

CONSEQUENCES OF FAILURE

A failed Persuasion roll usually means the character hasn't convinced the target to do what he wants him to, or hasn't convinced him that a lie is the truth. A bad failure (by 4 or more) makes it obvious what the character's trying to do, leaving him looking ridiculous and possibly exposing him to retaliation.

BASE TIMES

The Base Time for Persuasion depends on the length of the conversation involved. For telling lies and taunting that's usually just a Half Phase, but in some cases persuading a person could take hours.

SUBDIVIDING PERSUASION

Persuasion already has a fairly limited scope and thus probably doesn't need subdividing. In games with little social interaction, GMs could combine Conversation, Persuasion, and Seduction into one Skill.

PERSUASION BY GENRE

Persuasion works the same in all genres and time periods.

POWER

Type: Varies (see text)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

This Skill represents a character's ability to use one of his powers or abilities in creative or unusual ways. Its name (and usage) varies from campaign to campaign, setting to setting, character to character. For example, in a Fantasy campaign, Power could be called *Magic* and wizards would use it to cast spells; it might be called *Prayer* when used by priests to call forth divine aid (*i.e.,* activate their magical powers).

Characters can base Power on any one of several Characteristics, depending on the nature of the Skill as the character uses it. If based on INT, it's considered an Intellect Skill; if on DEX, an Agility Skill; and so forth.

USING POWER

Power serves several related functions. First, it may act as a Required Skill Roll for abilities that the GM rules must have a Skill Roll to function, or which take the *Requires A Skill Roll* Limitation.

Second, Power can simulate a character's level of skill with a particular power, ability, or attack. Characters who make appropriate Power rolls can perform "tricks" or do unusual things with their powers. For example, a "brick" in a comic book superhero campaign might buy Power as *Strength Tricks* and use it to etch a message into hardened steel without breaking the steel or hurting himself.

Third, Power provides a justification for a character using saved Experience Points to buy a new ability in mid-game. If a character senses a need for a new power that's reasonably closely related to his existing powers, the GM can allow him to make a *Power* roll. If the roll succeeds, he can spend the Experience Points on the power and start using it right away. If it fails he cannot, or can only spend half or less of what he wanted to spend, or can buy the power but not use it at full effect yet.

Controlling Power

The GM should control all uses of Power carefully. Power isn't a cheap substitute for a Variable Power Pool, and shouldn't be used as one. It's intended to give characters greater flexibility and the GM a way to keep the story moving forward in a dramatically appropriate fashion without worrying about whether a character has spent Character Points for every single possible application of his powers. Characters shouldn't use Power to provide Advantages for their Powers or to overcome Limitations (except in rare circumstances), nor should it provide bonuses in combat. Characters who want to perform a particular "trick" or "power stunt" frequently should pay Character Points for it (especially if it has an effect on combat). For example, the GM might let a character with *Strength Tricks* make a roll and use his awesome STR to squeeze coal so hard it turns into diamond (a type of Transform) — once. If he wants to do it again, he should buy it as a separate ability.

As a suggested guideline, the GM should examine the pregenerated abilities found in books like *The UNTIL Superpowers Databases, The Fantasy Hero Grimoires,* the *Ultimate* series of books, or similar lists he's prepared on his own for his campaign. A character with an appropriate form of the *Power* Skill who succeeds with a Skill Roll can create an effect with no more than *thirty percent* of the Active Points of any of the listed abilities. Any Advantages on an ability still apply to the Power-created ability, and must fit within the Active Point total; any Limitations on the ability also apply to the Power-created ability, but do not reduce the cost or somehow make it easier for the character to create.

If this isn't enough to get at least 1-2d6 of power or some similar quantifiable level of effect, the GM can allow the character to access more Active Points. However, he may impose a penalty on the roll (such as -1 per additional 1-10%) or any other restrictions he deems appropriate.

Example: *Firelord wants to create "rings of fire" around a thug to keep the thug from running away. Unfortunately, he doesn't have the Fiery Prison power (*The UNTIL Superpowers Database, *page 88). He decides to try to achieve the effect with his Fire Tricks 13-. Unfortunately, ten percent of the 60 Active Points in Fiery Prison is only 6 points — not much, given the +2 worth of Advantages on the power. He asks the GM to allow him to go to 40%, or 25 points — enough for an RKA ½d6 with Continuous and Area Of Effect (One Hex). The GM agrees, but imposes a -4 penalty on his Skill. Firelord rolls an 8, making it by one even with the penalty. Assuming Firelord can succeed with an Attack Roll to hit the thug, the thug will find himself trapped in rings of flame!*

If the character doesn't necessarily need more than ten percent of the Active Points to achieve a worthwhile effect, but wants to access more of the points for some reason, he may do so, but at the GM's option must apply to the ability at least -½ worth of Limitations per +1-10% Active Points *in addition to* any Limitations listed in the ability's writeup. These extra Limitations cannot include Requires A Skill Roll, since the character has to make a Skill Roll with his *Power* Skill to do this in the first place. Limitations like Concentration, Extra Time, Increased Endurance Cost, and Side Effects are the most appropriate, but they're not necessarily the only applicable ones.

Example: *Hydro needs to get the passengers on a burning yacht to safety quickly, but unfortunately he doesn't have the Water Walkway power. Ten percent of the Active Points in Water Walkway is a measly 2.4 points, only enough to grant Flight 1" to one person. He decides to try to achieve a Flight 3", Usable Simultaneously (up to four people at once; +¾) effect. That takes 10 Active Points, or about 40% of the full Active Points in Water Walkway. That means he needs to add -1½ worth of Limitations to the power — -½ worth for each 10% above 10%. He decides on Concentration (0 DCV, applies throughout as long as people are using the power; -1) and Increased Endurance Cost (x2 END; -½). That really leaves him vulnerable to attack by whoever set the yacht on fire, but it's worth it to get these people to safety!*

EQUIPMENT

Power doesn't involve equipment; it's a purely personal Skill.

CONSEQUENCES OF FAILURE

A failed Power roll usually just means the character fails to activate or manifest the power he wanted — he doesn't cast the spell, he can't use his control over fire to surround the target with a ring of flame. A bad failure (by 4 or more) may cause him to lose an entire Full Phase, have to spend twice the normal amount of END for the ability, or even injure himself — it's up to the GM based on the abilities involved, what the character's trying to do, and the circumstances.

BASE TIMES

The Base Time for using Power is a Half Phase, but the GM can reduce it to a Zero Phase Action if appropriate (as with its use as a Required Skill Roll, which is a Zero Phase Action).

SUBDIVIDING POWER

The GM determines how characters buy Power. Typically characters should be allowed to buy one Skill with a group of powers linked by a special effect (such as *Strength Tricks, Flame Powers, Ice Powers,* or *Mystic Powers* in a Champions campaign, or *Magic* for spellcasters in Fantasy campaigns). However, the GM might require characters to buy it by specific power or ability (Energy Blast Tricks, Lightning Bolt Tricks, Cast Fireball Spell), by Power Framework, or the like.

In some Fantasy Hero magic systems, GMs may want Magic to absorb and replace Analyze Magic and Spell Research. The latter two Skills presuppose a system where studying magic, working magic, and inventing magic are quite different activities, posing different mental challenges. That may not be the case in settings where magic depends on intuition, an inborn supernatural gift, or the favor of the gods... or the GM simply doesn't want to ask characters to buy three Skills instead of one.

POWER BY GENRE

Power works the same in all genres; it just tends to be more common in some (particularly Fantasy and Superheroes).

Fantasy

The *Power* Skill takes two primary forms in Fantasy games.

The first is *Magic,* which many campaigns use as the Required Skill Roll for spellcasting. It's usually based on INT, but sometimes on EGO where working magic depends on force of will. Typically it only represents a character's ability

to cast spells or use magical abilities; it doesn't involve knowing any arcane lore or the like (that requires a Knowledge Skill of some type). It represents magic that's inherently unreliable, since a failed Skill Roll means a spell doesn't work (as opposed to, say, superpowers in a Champions game, which are usually 100% reliable). See pages 246-48 of *Fantasy Hero* for more information on using this Skill within magic systems.

The second is *Faith,* sometimes instead known as *Prayer* or *Miracles.* It's usually based on EGO, or sometimes PRE. Priests make a roll with this Skill to invoke the power of their gods and "cast spells." It may not really differ from Magic at all; it depends on how the GM defines magic in his setting.

Gamemasters can also let characters use Magic (and if appropriate, Faith) to activate magic items without the need for the character to actually know how the item works. The character suffers a -1 per 10 Active Points penalty to the roll as he tries to activate the item by intuition, force of will, and dumb luck. (If the character has time to study the item, Analyze Magic or Spell Research become the relevant Skills, without Active Point penalties.)

Martial Arts

In some martial arts campaigns, characters can buy a Power Skill, *Martial Arts Tricks,* for use as a Required Skill Roll with various special abilities. Video Game and Anime characters may also buy *Power:* Ch'i *Powers* for use with their specific power sets.

Martial arts action heroes seem capable of almost anything, and often exhibit powers they only use once or twice (usually to resolve a key plot element) and then ignore. Unless the GM wants them to buy all possible powers with Character Points (or perhaps buy a VPP), using the *Power* Skill to simulate this works well.

Science Fiction

Power appears in Star Hero campaigns under a variety of names. For example, if a character is psionic, he may have *Psionics.* Alien species with natural powers may have Power as an Everyman Skill.

Superheroes

Since superheroes have lots of powers of broad application and often think up unusual ways to use them in combat, the *Power* Skill is both common and appropriate in this genre. Some examples include Brick Tricks, Mental Powers, and Speedster Tricks, which are covered in greater detail in various *Ultimate* books.

PROFESSIONAL SKILL

Type: Background Skill (roll: see text)
Cost: 2 Character Points for a base 11- roll, convert PS to a Characteristic-Based Skill for +2 Character Point (total of 3 Character Points), +1 to the roll per +1 Character Point

These Background Skills give a character the ability to perform certain professions, crafts, tasks, and the like. Two points gives the character an 11- roll to perform a given Professional Skill (PS). Alternately, characters can base the Skill upon a Characteristic for 3 Character Points, giving a base (9 + (CHAR/5)) roll. In either case, each +1 to the Skill Roll costs 1 Character Point. Most PSs are based on DEX (if they primarily involve the use of the hands), INT (if they primarily involve learning, thinking, and applying knowledge), or PRE (if they primarily involve personal appeal, charisma, and social skills).

As the name indicates, characters often use Professional Skills in their jobs. However, PSs can also represent hobbies, interests, and other abilities that don't have much to do with earning a living. Play Piano, Flower Arranging, Play Chess, Sculptor, Singing, Singer, and Poet are all valid PSs.

The list of Professional Skills is limitless. Examples include: Accountant, Actor, Alchemist, Armorer, Artist, Blacksmith, Brain Surgeon, Butcher, Campaign Manager, Carpenter, Construction Worker, Cook, Dentist, Dogcatcher, Electrician, Explorer, Fisherman, Freelance Game Designer, Goldsmith, Gunslinger, Hockey Player, Innkeeper, Jester, Jeweler, Knight, Laborer, Lawyer, Mason, Messenger, Musician, Necromancer, Newscaster, Optometrist, Park Ranger, Photographer, Policeman, Priest, Queen, Reporter, Scientist, Secretary, Starship Captain, Student, Taxi Driver, Undertaker, Valet, Vigilante, Waiter, Wizard, X-ray Technician, Yeoman, and Zookeeper. Genre books published by Hero Games often contain lists of PSs appropriate to specific genres.

DEFINING PROFESSIONAL SKILLS

Whereas Knowledge Skills give a character knowledge of how or why something works, Professional Skills give a character the ability to perform some task or do some type of work. For example, a character with KS: Plumbing knows generally how plumbing works, the history of plumbing, how much plumbers earn on a yearly basis, and so forth. A character with PS: Plumbing might not understand the intricacies of water pressure and water flow friction, but he could fix a broken pipe and knows how to use plumbing tools. A character could (and often should) have a KS and a PS of the same subject to reflect both a theoretical and practical knowledge. See the *Background Skills* section on page 62 for further discussion comparing and contrasting KS, PS, and SS.

Broadly speaking, you can divide Professional Skills into two categories: *activity* PSs and *professional management* PSs. An activity PS, usually

written as a verb, indicates the ability to do some activity. A professional management PS, usually written as a noun, indicates knowing how to make money with an activity PS, manage a professional career or facility using an activity PS, and so forth. Examples include:

PS: Accounting: how to keep books, perform accounting procedures, and so forth

PS: Accountant: how to make money with accounting skills, manage an accounting practice, and so on

PS: Singing: how to sing well

PS: Singer: how to make money with one's singing ability, determine rates of pay for singers, manage one's singing career, and the like

PS: Cooking: how to prepare food well

PS: Cook: how to make money as a cook, run a professional kitchen, and so forth

PS: Sculpting: how to create sculpture

PS: Sculptor: how to sell one's sculpture, make money as a sculptor, seek out grants and commissions, and so on

This distinction may be unnecessary in cinematic campaigns, or in any campaign in the case of some very narrowly-defined abilities/professions. In that case one PS can cover both the "activity" and "professional management" aspects of a given pursuit.

TYPES OF PROFESSIONAL SKILLS

Most Professional Skills fall into one of several thematic types. These include:

Arts And Crafts

One popular category of PS involves creating artwork, craft objects, and the like. In some cases a character does this for money; in others just for fun. Examples include:

PS: Embroidery, PS: Flower Arranging, PS: Knitting, PS: Macrame, PS: Origami, PS: Painting, PS: Play [Musical Instrument] (but see *Musical Instrument Familiarity* on page 362), PS: Potting, PS: Sculpting, PS: Singing, PS: Whittling

Games And Sports

Characters also use Professional Skills to represent the ability to play various types of games and sports. (As noted on page 196, Gambling lets a character know how to play many games on its own, with PSs used as Complementary Skills if appropriate. If a character only has a PS in a game, he knows how to play it, but usually not as well as a character with the corresponding type of Gambling, and unlike a character with Gambling he doesn't really know how to cheat at it in a sophisticated way.) Examples include:

PS: Play [Sport] (Baseball, Football, Hockey, Lacrosse, Curling, Golf...), PS: Play [Game] (Checkers/Draughts, Chess, Dominoes, *Fan Tan, Go...*), PS: Weightlifting and PS: Bodybuilding (see *The Ultimate Brick,* page 32)

Hobbies

This category covers activities that are generally considered leisure pursuits but which don't fall into some other category. Examples include things like PS: Gardening.

Manufacturing

This type of PS represents the ability to create or make something, usually for purposes of commerce rather than art. Examples include:

PS: Armorsmithing (but see *Armorsmith* on page 354), PS: Blacksmithing, PS: Brewing, PS: Carpentry, PS: Jewelrymaking/Lapidary, PS: Leatherworking, PS: Sewing, PS: Tanning

Professional Management

As mentioned above, some PSs represent a character's ability to manage a professional career. Examples include:

PS: Aviator, PS: Asteroid Miner, PS: Beggar, PS: Doctor, PS: Explorer, PS: Innkeeper, PS: Lawyer, PS: Merchant, PS: Sailor, PS: Soldier, PS: Spy, PS: Starship Captain, PS: Tailor, PS: Veterinarian, PS: Wizard, PS: Zookeeper

Miscellaneous Activities

This category includes activities and pursuits that don't fit into any other category. Examples include:

PS: Sailing (see *The Ultimate Vehicle,* page 222), PS: Zero-G Operations (see *Star Hero,* pages 45-46)

PROFESSIONAL SKILLS AND OTHER SKILLS

It's possible for a character to do some jobs without a relevant PS just by having the Skills fundamentally necessary to do that job (like Demolitions for an Explosive Ordnance Disposal specialist). But having a PS (typically of the "professional management" variety) lets the character know about the finer points of the job and provides specialized information about things like pay rates, regulations, how (in theory) to make a profit, time- and labor-saving practices, permits that aren't worth a Fringe Benefit, and the like.

Characters generally shouldn't use Professional Skill to substitute for the abilities provided by another Skill. However, the GM might permit this if a character just wants to be able to use a very limited function of a Skill. For example, a character who's a car thief might want to know how to hotwire cars. Instead of making him buy Electronics (since he knows nothing about electrical systems in general) the GM lets him buy PS: Hotwire Cars.

As discussed on page 9, in some campaigns GMs allow characters to buy high rolls with a broad PS (like PS: Spy) and then use the Extraordinary Skill rules to mimic the functions of other Skills as a way of cutting down on the amount of points characters have to spend on Skills. Similarly, the GM might allow a character to take a single broadly-defined PS to represent a very basic level of knowledge/ability in a variety of related fields. This is particularly common in the military, where many types of "specialists" have to know a little bit about many other military jobs as a way of coordinating military activities and providing logistical support.

EQUIPMENT

Most Professional Skills involve some type of equipment, whether it's a game ball and uniform, tools, measuring devices, or the raw materials used to make something. Many PSs also represent, in whole or in part, a character's ability to use the various types of equipment associated with a particular job or pursuit.

CONSEQUENCES OF FAILURE

Typically a failed PS roll means the character didn't accomplish what he set out to do — he couldn't build the bookshelf, paint the still-life, score the winning touchdown, or what have you. A bad failure (by 4 or more) usually means some significant negative consequence, such as ruining all the raw materials (or all the work done up to the point of failure), the character hurting himself or others, and so on.

BASE TIMES

The Base Time for using a Professional Skill depends on the specific PS and the task involved. Very simple tasks typically require 1 Turn to 1 Minute, but complex ones can take hours or days. For most significant tasks the GM can often assume a Base Time of 1 Hour.

UNIFYING PROFESSIONAL SKILL

Professional Skill is such a broad Skill that it generally shouldn't be "unified"; that would spoil its usefulness and flavor. If you're interested in suggestions for making it easier for characters to buy lots of PSs cheaply, see the optional rules in the *Skill Enhancers* section in Chapter One.

PROFESSIONAL SKILL BY GENRE

Professional Skill works the same in every genre and time period, but the PSs that are available or commonplace can vary greatly. See the genre books and other supplements published by Hero Games for suggestions on appropriate PSs.

RAPID ATTACK

Type: Combat Skill (roll: N/A)
Cost: 5 Character Points (see text)

A character with this Combat Skill has a heightened ability to move in combat. Characters must purchase Rapid Attack separately for HTH Combat and Ranged Combat; either version costs 5 Character Points. No roll is required in either case.

Ranged Rapid Attack allows a character to make an attack with the *Rapid Fire* Combat Maneuver or Autofire Skills as a Half Phase Action (*i.e.,* after performing a Half Phase Action, such as making a Half Move).

HTH Rapid Attack allows a character to make an attack with the *Sweep* Combat Maneuver as a Half Phase Action.

Rapid Attack applies to Rapid Fire and Sweep as used with the *Two-Weapon Fighting* Skill.

EQUIPMENT

Rapid Attack doesn't require any equipment; it's a purely personal Skill.

BASE TIMES

Either version of Rapid Attack requires a Half Phase to use.

UNIFYING RAPID ATTACK

At the GM's option, characters only have to buy Rapid Attack once; it applies to both HTH and Ranged Combat. In this case the GM may choose to keep the cost the same (5 Character Points), or may increase it to 8 or 10 Character Points.

RAPID ATTACK BY GENRE

Rapid Attack works the same in all genres. It's most common in modern and near-future genres, such as Dark Champions and Cyberpunk, but in some form it's appropriate to just about any setting.

RIDING

Type: Agility Skill (roll: 9 + (DEX/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

This Agility Skill allows a character to ride a living creature under difficult circumstances. A character with Riding knows how to stay astride his mount, how to make the mount move in the direction and way he wants it to, how to equip and care for the animal, and so forth. Riding does not allow a character to train his mount to perform tricks; that requires Animal Handling (see above). Nor does it allow him to perform acrobatic-type maneuvers in the saddle, which requires Acrobatics (see page 71), though the GM might allow a character with Riding to attempt such stunts at a -3 penalty.

In routine circumstances, a character can ride any mount for which he has a Transport Familiarity (see page 342) without making a roll. Things like a pleasant ride or gallop through the countryside, pulling a wagon full of hay, or jumping a small obstacle for fun don't require a Skill Roll. Only when the character tries something unusual, or is in stressful conditions (such as combat or an emergency), does he have to make a roll to ride.

When a character buys Riding, he receives for free a Transport Familiarity with a 1-point group of riding animals (Camels, Dogs, Equines, Flying Beasts, Huge Beasts, Swimming Beasts, or other groups created by the GM). He may buy other TFs as usual for that Skill. At the GM's option a character can use Riding with an animal he doesn't have a TF for, but at -3 to all rolls.

RIDING MODIFIERS

Use/Circumstance	Modifier
In combat	See *Mounted Movement*
Injured animal	Apply "damage to subject" mod. from Chapter One
Injured rider	Apply "injury" modifiers from Chapter One
Injury to legs or arms	Additional -1 to -3
Steering mount with knees	-1
Jumping	
Small obstacle	-0
Medium obstacle	-2
Large obstacle	-4
Very large obstacle	-8, or impossible
Movement modifiers	
Mount moves/turns violently	-2 to stay in the saddle
Mount moves/turns very violently	-4 to stay in the saddle
Make flying/swimming mount hover/float	-2 (if possible at all)
Make flying/swimming mount move upside down	-4 (if possible at all)
Make mount Push its movement	-3
Mount climbs vertical surface using Clinging	-3
Weather	
Moderate (winds 31-44 MPH)	-1
Heavy (winds 45-57 MPH)	-2
Very Heavy (winds 58-71 MPH)	-3
Storm Force (winds 72+ MPH)	-4

In some cases, animals have a *Riding* Skill of their own. This doesn't allow them to ride other animals, but rather functions as a Complementary Skill for a rider's Riding. This represents the mount's training at helping a rider keep his seat, avoid falls, and the like. The animal should take a -1 Limitation, *Complementary To Rider's Skill Only,* for its Riding.

USING RIDING

The accompanying Riding Modifiers table lists some of the more common situations requiring a character to make a Riding roll. For Riding in combat, you should also refer to the *Mounted Movement* section on pages 368-69 of *The HERO System 5th Edition, Revised.* Standard Combat Modifiers, such as Encumbrance, may also apply.

The size of an obstacle typically depends on the size of the mount. A "small" obstacle is no more than one-third the mount's size. A "medium" obstacle is larger than one-third, but smaller than three-quarters of the mount's size. A "large" obstacle is from three-quarters to 125% of the mount's size. A "very large" obstacle is larger than 125% of the animal's size.

Weather applies to aerial mounts (such as griffins or giant birds) and in some cases to aquatic mounts (such as giant fish or turtles). Land mounts generally aren't affected by the weather, though the noise it causes may frighten an animal, thus requiring the rider to make a roll to control it.

Mounting And Dismounting

Typically mounting a riding animal takes a Full Phase, while dismounting one takes a Half Phase (in both cases, the GM can increase the time as necessary, particularly for large mounts like elephants and rocs). If a character succeeds with a Riding roll, he can mount in a Half Phase and dismount as a Zero Phase Action. If he fails, he takes the usual time; if he fails badly (by 4 or more), he falls.

Spurring

For most mounts, characters with Riding know how to "spur" them — how to obtain a temporary burst of speed by causing the animal pain. With a successful roll, which takes no time, the character forces the mount to Push its movement for +1" (+2" for success by half or a Critical Success) (this does not incur the typical penalty for making a mount Push its movement). This causes the animal ½ point of BODY damage. If the roll fails the character has to make another Riding roll to stay in the saddle as the animal balks or tries to throw him; if the roll fails badly (by 4 or more), the character automatically gets thrown.

EQUIPMENT

Riding assumes a character has at least minimal equipment for staying on a mount, such as a saddle and reins. If a character's riding bareback, impose a -1 penalty; if the character has no reins or the like (whether or not he has a saddle), impose a -2 penalty. On the other hand, some equipment, like special military saddles, may provide bonuses to rolls for the character to remain seated on the mount.

POWERS AND RIDING

A touch of Mind Control that affects the Animal class of minds may help make a mount calm and cooperative, possibly yielding a small bonus to Riding rolls. Similarly, Telepathy with animals makes it easier to communicate with an animal, which may help considerably with Riding.

CONSEQUENCES OF FAILURE

The consequences of a failed Riding roll vary. Typically they mean the animal didn't perform as commanded — it shied away from making the jump, won't speed up to a gallop, or the like. In many cases, this is an ordinary failure; the rider can try again if he wants to using the standard rules for that. If the roll fails badly (by 4 or more), the rider may fall from his saddle due to the horse's sudden movement or other factors. The rider must succeed with a STR Roll at -2 or fall off the mount.

Falling off a swimming mount may not have any dangerous consequences (other than getting left behind, perhaps). On the other hand, falling off a flying mount could result in the character's death (see *Falling* on page 434 of *The HERO System 5th Edition, Revised*). Falling from a ground-based mount is roughly like performing a Move Through on the ground — the character takes the mount's velocity divided by three (v/3) in dice of Normal Damage. He may make a Breakfall roll, at -1 per 2d6, to take only half damage (or no damage, if he makes the roll by half). (At the GM's option, Riding may serve as a Complementary Skill.) If the mount was standing still, the character takes 2d6 Normal Damage from the fall.

BASE TIMES

The time required to use Riding in combat is covered under *Mounted Movement* in the main rulebook. Other tricks and stunts performed with Riding usually require a Zero Phase Action or take no time.

SUBDIVIDING RIDING

In genres where characters often ride animals, such as most Fantasy games and some Science Fiction games, the GM may prefer that they buy Riding by category, using the categories and rules for Animal Handler.

RIDING BY GENRE

Riding is most common in Fantasy, and to a lesser extent any pre-modern genre/time period. Once automobiles and more advanced vehicles become available, animals are used less frequently for transportation except in specialized circumstances.

Pulp

Riding is a much more common Skill among Pulp characters than modern-day characters. Cars certainly exist in the Pulp era (their numbers increase enormously most years, particularly in the Twenties), but they're concentrated in civilized countries and around cities. Many, many people grow up in the countryside riding horses and mules; in other countries the camel still rules the



roadways. Adding even a Familiarity with Riding is a good way to give a character a touch of background that doesn't necessarily have anything to do with his current career... and which may come in handy on his adventures.

Science Fiction

In Science Fiction settings, Riding requires the same consideration as Transport Familiarity (see page 345), since the types of animals a character can ride depends on his TFs. In a Space Opera or Pulp-style *Star Hero* campaign, a character's ability to ride a particular type of animal from his homeworld may automatically extend to similar creatures on other worlds. For example, a Human who can ride horses can ride any horse-like creature on any world (though the GM may impose a minor penalty, such as -1, until the character and his mount get to know each other). Alternately, for purposes of Riding the GM may allow characters to buy 2-point Riding TFs by planet: Earth Riding Creatures, Venusian Riding Creatures, Spica IV Riding Creatures, and so forth.

In a Hard SF game, Riding (and associated TFs) rarely, if ever, carry over from world to world. A character who wanted to ride horse-like creatures on many worlds would have to pay for each 1-point TF separately: Earth Equines, Venusian Equines, Spica IV Equines, and so on.

At the GM's option, a character can use Riding for creatures he does not have a TF for, but at a minimum -3 penalty to all rolls. Creatures larger than the "Huge Animals" TF category (such as the sandworms of *Dune*) may impose additional penalties on the Riding roll, because they're so large and tough it's hard to control them.

SCIENCE SKILL

Type: Background Skill (roll: see text)
Cost: 2 Character Points for a base 11- roll, convert SS to an INT-Based Skill for +2 Character Point (total of 3 Character Points), +1 to the roll per +1 Character Point

These Background Skills give a character a solid grasp of and working knowledge of a particular field of science (whether a physical science, like Chemistry, or a social science, like Anthropology). A Science Skill (SS) thus functions as a combination of a PS and a KS, since it provides both theoretical knowledge of the subject and the practical skills of working with the equipment associated with a Science.

Just a few examples of Science Skills include: Accounting, Anthropology, Archaeology, Astronomy, Bacteriology, Biochemistry, Biology, Biophysics, Botany, Chemistry, Ecology, Exobiology, Genetics, Geology, Hydrology, Inorganic Chemistry, Marine Biology, Mathematics, Medicine, Metallurgy, Microbiology, Molecular Biology, Nuclear Physics, Organic Chemistry, Paleontology, Pharmacology, Physics, Psychology, Robotics, Sociology, Statistics, Subatomic Physics, Surgery, Veterinary Medicine, Zoology. See the Sciences Table for many others.

BUYING SCIENCE SKILLS

Science Skills cost 2 points for a base roll of 11-. Alternately, characters can base the SS upon INT for 3 Character Points, giving a base (9 + (INT/5)) roll. In either case, each +1 to the Skill Roll costs 1 Character Point. Characters may not take a Science which exactly duplicates another Skill (like Computer Programming), although Skills often partly overlap.

A character need not buy a general category of science before buying a specific science (for example, a character doesn't have to buy Chemistry before buying Biochemistry). A character with a specific science has a vague knowledge of the general science, and vice versa; see the rules below for using the Sciences Table.

The Sciences Table

The accompanying table lists dozens of Science Skills characters can buy, organized into eight fields: Biology; Chemistry; Earth Sciences; Engineering; Health Sciences; Mathematics; Physics; and Social Sciences.

FIELDS AND SUBFIELDS

Each category is divided into four subcategories, representing correspondingly more specialized and precise subjects: field; discipline; subdiscipline; and specialty. Characters with any SS can make rolls in related subjects within that field at a penalty, reflecting the various levels of knowledge incorporated within a scientific subject.

A character with any "field" Science Skill (the eight SSs listed above) has a general knowledge

of the entire field. He can answer basic questions pertaining to the subject at no penalty. For subjects that fit into a discipline, he can make a roll at a -2 penalty; for a subdiscipline at a -4 penalty; and for a specialty at a -6 penalty.

If a character has a "discipline"-level SS, he can answer questions about it at no penalty. He can answer general questions about the field his discipline belongs to at a -2 penalty, and can answer questions in any subdisciplines of his discipline at a -2 penalty. He can answer questions about any speciality of any subdisciplie of his discipline at a -4 penalty.

If a character has a "subdiscipline"-level SS, he can answer questions about it at no penalty. He can answer questions about the discipline it belongs to at a -2 penalty, and about the field it belongs to at a -4 penalty. If his subdiscipline has any specialties, he can answer questions about them at a -2 penalty.

If a character has a "specialty"-level SS, he can answer questions about it at no penalty. He can answer questions about the subdiscipline it belongs to at a -2 penalty, about its discipline at a -4 penalty, and about its field at a -6 penalty.

Example: *Doctor Anomaly is well-versed in many scientific subjects. One of his many Science Skills is SS: Biology. That means he can answer general questions about the biological sciences at no penalty. If someone asks him a question that pertains to a discipline of Biology, such as Zoology, he suffers a -2 penalty. If the question's about a subdiscipline of Zoology, such as Entomology, he makes his roll at a -4 penalty. If the question refers to a specialty of Entomology, such as Lepidopterology (the study of butterflies and moths), he suffers a -6 penalty.*

Doctor Anomaly also has SS: Astronomy (also known as Astrophysics), a discipline-level Science Skill in the broader field of Physics. That means he can make rolls pertaining to Astronomy itself at no penalty. If the question involves a subdiscipline of Astronomy, such as Cosmology, he suffers a -2 penalty; he can also answer general Physics questions at a -2 penalty.

RELATED SCIENCES

The Sciences Table also includes columns listing sciences that are related to a given SS, in four categories: Very Closely Related; Closely Related; Loosely Related; Very Loosely Related. A character can use a Science Skill to make a roll with any Very Closely Related SS at a -2 penalty, a Closely Related SS at a -4 penalty, a Loosely Related SS at a -6 penalty, and a Very Loosely Related SS at a -8 penalty.

Mathematics

Most sciences involve or use math in some respect, even if just to gather and analyze statistical data. However, Mathematics isn't listed as a related Science Skill for any other SS because it links to so many of them. The GM should treat it as at least Very Loosely Related to many fields, and at least Loosely related to math-heavy fields like Engineering and Physics.

"COMBINATION" SCIENCES

Many Science Skills at the "discipline" or more precise levels study the intersection of two subjects or fields. Examples include Biochemistry, Hydrobiology, and Geophysics. Some of these are listed on the Sciences Table, but characters can easily devise others as appropriate. Any "combination" SS is one step to the right on the Sciences Table of the right-most SS included as part of it. For example, Biochemistry involves two fields (Biology and Chemistry), making it a discipline; Geochemistry combines a field (Chemistry) with a discipline (Geology), so it's a subdiscipline (one step to the right of the discipline of Geology).

XENO-SCIENCES

In Science Fiction campaigns where characters frequently interact with alien species, characters can apply the prefix *Xeno* ("foreign") to a Science Skill to indicate that they know about that SS as it pertains to other species rather than their own species. For example, a Human character with Xenobiology knows about aliens' biological systems rather than Human ones; an explorer with Xenoanthropology and Xenoarchaeology is an expert on aliens' customs, traditions, ruins, and relics rather than those of mankind. (In some cases the prefix Exo- is used instead.)

A Xeno SS is usually considered to be one step to the right on the Sciences Table: for example, if it involves a field (*e.g.,* Xenobiology) it's a discipline; if it involves a discipline (*e.g.,* Xenoanthropology) it's a subdiscipline; and so forth.

THEORETICAL SCIENCES

The Sciences Table lists some "theoretical" sciences, such as SS: Theoretical Chemistry and SS: Theoretical Physics. These are typically subdisciplines that represent the ability to use mathematical models, non-experimental reasoning, and the like to predict or explain observed phenomena pertaining to the field to which they belong. Characters can create theoretical versions of other SSs unless the GM objects.

RUBBER SCIENCE

The Sciences Table does not include fictional sciences, rubber sciences, or weird sciences often found in comics, movies, novels, and other inspirational source fiction — things like Hyperspace Physics, Dimensional Engineering, Force Field Physics, and the like. (See pages 56-57 of *Champions Universe,* or the "Science Fiction" section below, for several examples.) These are very campaign-specific Science Skills, so if the GM wants to define and use them he should figure out how they fit into the scheme of the Sciences Table (if at all).

-2 from Field	-4 from Field	-6 from Field	roll at -2	roll at -4	roll at -6	roll at -8
FIELD **BIOLOGY**	**DISCIPLINE**	**SUBDISCIPLINE**	**SPECIALTY**	**VERY CLOSELY RELATED**	**CLOSELY RELATED** Biomedical Engineering Marine Biology	**LOOSELY RELATED** Physical Anthropology	**VERY LOOSELY RELATED**
	Biogeography						
	Botany						
		Dendrology					
		Mycology					
		Palynology					
		Phycology					
	Developmental Biology						
	Ecology				Ecohydrology		
	Evolutionary Biology				Paleontology		
		Phylogenetics					
		Taxonomy					
	Genetics				Microbiology		
	Histology				Diagnostics		
	Microbiology (Molecular And Cell Biology)				Biochemistry Genetics Diagnostics		
		Bacteriology					
		Cytology					
		Virology					
	Physiology				Medicine		
		Anatomy					
	Zoology						
		Arachnology					
		Cryptozoology					
		Entomology					
			Apiology				
			Coleopterology				
			Dipterology				
			Lepidopterology				
			Orthopterology				
		Ethology					
		Herpetology					
			Ophiology				
		Ichthyology					
		Mammalogy					
			Cetology				

	-2 from Field	-4 from Field	-6 from Field	roll at -2	roll at -4	roll at -6	roll at -8
FIELD	**DISCIPLINE**	**SUBDISCIPLINE**	**SPECIALTY**	**VERY CLOSELY RELATED**	**CLOSELY RELATED**	**LOOSELY RELATED**	**VERY LOOSELY RELATED**
			Cynology				
			Equinology				
			Felinology				
			Primatology				
		Ornithology					
CHEMISTRY					Chemical Physics	Chemical Hydrology Chemical Oceanography	
	Analytical Chemistry						
	Biochemistry				Medicine Microbiology		
	Inorganic Chemistry						
	Organic Chemistry						
	Pharmacology/ Toxicology					Health Sciences	
	Theoretical Chemistry						
EARTH SCIENCES							
	Atmospheric Sciences						
		Aeronomy					
		Climatology					
		Meteorology			Hydrometeorology Meteorological Oceanography		
	Geodesy/ Geophysics						
	Geology				Hydrogeology		
		Geochemistry					
		Geomorphology					
		Mineralogy					
		Paleontology			Evolutionary Biology		
			Invertebrate Paleontology		Zoology		
			Micropaleontology				
			Paleoanthropology			Anthropology	
			Paleobotany			Botany	
			Paleozoology		Zoology		
			Vertebrate Paleontology		Zoology		
		Petrology				Petroleum Engineering	

	-2 from Field	-4 from Field	-6 from Field	roll at -2	roll at -4	roll at -6	roll at -8
FIELD	**DISCIPLINE**	**SUBDISCIPLINE**	**SPECIALTY**	**VERY CLOSELY RELATED**	**CLOSELY RELATED**	**LOOSELY RELATED**	**VERY LOOSELY RELATED**
		Plate Tectonics					
		Sedimentology					
		Soil Science					
			Edaphology				
			Pedology				
		Speleology					
		Stratigraphy					
			Biostratigraphy				
			Lithostratigraphy				
		Vulcanology					
	Glaciology						
	Hydrology			Limnology			
		Chemical Hydrology				Chemistry	
		Ecohydrology			Ecology		
		Hydrogeology			Geology		
		Hydroinformatics					
		Hydrometeorology			Meteorology		
		Hydromorphology					
			Isotope Hydrology				
			Surface Hydrology				
	Limnology			Hydrology			
	Oceanography						
		Chemical Oceanography				Chemistry	
		Marine Biology			Biology		
		Marine Geology					
		Meteorological Oceanography			Meteorology		
		Physical Oceanography					
ENGINEERING							
	Agricultural Engineering						
	Architecture/ Architectural Engineering						
	Biomedical Engineering					Biology	
	Chemical Engineering						
		Plastics Engineering					

	-2 from Field	-4 from Field	-6 from Field	roll at -2	roll at -4	roll at -6	roll at -8
FIELD	**DISCIPLINE**	**SUBDISCIPLINE**	**SPECIALTY**	**VERY CLOSELY RELATED**	**CLOSELY RELATED**	**LOOSELY RELATED**	**VERY LOOSELY RELATED**
	Civil Engineering						
		Construction Engineering					
		Hydraulic Engineering					
		Structural Engineering					
		Transportation Engineering					
	Computer Engineering						
		Software Engineering					
	Electronic/ Electrical Engineering						
		Cybernetics					
		Optronics			Optics		
	Environmental Engineering						
		Sanitary Engineering					
	Industrial Engineering						
		Safety Engineering					
	Marine Engineering						
	Materials Engineering/ Materials Science				Materials Physics		
		Metallurgy					
	Mechanical Engineering						
		Aerospace Engineering					
			Astronautical Engineering				
		Engine Design					
		Fluid Systems					
		Robotics					
	Mining And Geological Engineering						
	Nanotechnology						
	Nuclear Engineering						
	Petroleum Engineering						

	-2 from Field	-4 from Field	-6 from Field	roll at -2	roll at -4	roll at -6	roll at -8
FIELD **HEALTH SCIENCES**	**DISCIPLINE**	**SUBDISCIPLINE**	**SPECIALTY**	**VERY CLOSELY RELATED**	**CLOSELY RELATED**	**LOOSELY RELATED**	**VERY LOOSELY RELATED**
	Clinical Medicine (*a.k.a.* Medicine)				Biochemistry		
		Anaesthesiology					
		Dermatology					
		Internal Medicine					
			Cardiology				
			Endocrinology				
			Forensic Pathology				
			Gastroenterology				
			Geriatrics				
			Hematology				
			Hepatology				
			Infectious Diseases				
			Nephrology				
			Oncology				
			Otolaryngology				
			Pulmonology				
			Rheumatology				
			Urology				
		Neurology			Neuropsychology		
		Obstetrics & Gynecology					
		Optometry		Ophthalmology			
		Pediatrics					
		Psychiatry		Psychology			
			Forensic Psychiatry				
		Surgery					
			Ophthalmology	Optometry			
			Orthopedics				
			Plastic Surgery				
	Dentistry						
	Diagnostics				Histology Immunology Microbiology		
		Clinical Laboratory Science					
		Radiology					
	Dietetics						

	-2 from Field	-4 from Field	-6 from Field	roll at -2	roll at -4	roll at -6	roll at -8
FIELD	**DISCIPLINE**	**SUBDISCIPLINE**	**SPECIALTY**	**VERY CLOSELY RELATED**	**CLOSELY RELATED**	**LOOSELY RELATED**	**VERY LOOSELY RELATED**
	Embryology						
	Epidemiology						
	Immunology				Diagnostics		
	Osteopathy						
	Pathology						
	Veterinary Medicine						
		Avian Medicine					
		Bovine Medicine					
		Canine Medicine					
		Equine Medicine					
		Feline Medicine					
		Reptile Medicine					
MATHEMATICS					Physics		
	Algebra						
		Field Theory					
		Number Theory					
	Analysis						
	Applied Mathematics						
		Accounting					
		Probability Theory					
		Statistics					
	Calculus						
	Geometry						
		Euclidean					
		Non-Euclidean					
		Topology					
	Trigonometry						
PHYSICS					Mathematics		
	Astronomy/ Astrophysics						
		Cosmology					
		Planetary Physics					
		Plasma Physics					
	Atomic/ Molecular/ Optical Physics						
		Atomic/Subatomic Physics					
		Chemical Physics			Chemistry		

	-2 from Field	-4 from Field	-6 from Field	roll at -2	roll at -4	roll at -6	roll at -8
FIELD	**DISCIPLINE**	**SUBDISCIPLINE**	**SPECIALTY**	**VERY CLOSELY RELATED**	**CLOSELY RELATED**	**LOOSELY RELATED**	**VERY LOOSELY RELATED**
		Molecular Physics					
		Optics			Optronics		
		Photonics					
	Condensed Matter Physics						
		Materials Physics			Materials Engineering/ Materials Science		
		Polymer Physics					
		Solid State Physics					
	Particle Physics						
		Accelerator Physics					
		Nuclear Physics					
	Theoretical Physics						
SOCIAL SCIENCES							
	Anthropology					Paleoanthropology	
		Archaeology					
		Cultural Anthropology					
		Linguistic Anthropol-ogy			Linguistics		
		Physical Anthropology				Biology	
	Demographics						
	Economics						
	Geography						
	Linguistics				Linguistic Anthropol-ogy		
	Psychology			Psychiatry			
		Neuropsychology			Neurology		
		Psychoanalysis					
	Sociology						

Other Rules

EQUIPMENT

Most Science Skills involve some types of equipment: tools, laboratory equipment, measuring devices, microscopes, chemicals, and so on. In part Science Skills represent a character's ability to use the various types of equipment associated with a particular scientific field. If a character doesn't have the right equipment for the task at hand, the GM should apply the standard penalties for lack of equipment or improvised equipment. Usually, a character may carry a "field bag" with some basic equipment (enough to perform simple experiments without a penalty).

CONSEQUENCES OF FAILURE

Typically a failed roll means the character didn't accomplish what he set out to do — his experiment went wrong, some unforeseen occurrence invalidated a test, or the like. A bad failure (by 4 or more) usually means some significant negative consequence, such as ruining all the raw materials (or all the work done up to the point of failure), the character hurting himself or others, and so on.

BASE TIMES

The Base Time for using a Science Skill depends on the specific SS and the task involved. Remembering a fact or answering a question usually requires a Full Phase (possibly less). Researching a fact or subject requires a minimum Base Time of 20 Minutes for a field, 1 Hour for a discipline, 2 Hours for a subdiscipline, and 3 Hours for a specialty. The GM can adjust this Base Time up or down as he sees fit depending on the obscurity of the fact and other factors; the optional new *Research* Skill (page 371) may reduce the time required.

For physical tasks, such as performing an experiment or gathering specimens, the Base Time varies based on the circumstances and activity. Very simple tasks typically require 1 Turn to 1 Minute, but complex ones can take hours or days. For most significant tasks the GM can often assume a Base Time of 1 Hour.

UNIFYING SCIENCE SKILL

Science Skill is such a broad Skill that it generally shouldn't be "unified"; that would spoil its usefulness and flavor. If you're interested in suggestions for making it easier for characters to buy lots of SSs cheaply, see the optional rules in the *Skill Enhancers* section in Chapter One.

SCIENCE SKILL BY GENRE

Science Skill works the same in every genre and time period, but the SSs that are available or commonplace can vary greatly. See the genre books and other supplements published by Hero Games for suggestions on appropriate SSs.

Fantasy

Science Skills don't occur frequently in most Fantasy settings; methods of thinking about the world hadn't often reached "scientific" levels of accuracy and knowledge during the low-tech periods most Fantasy games emulate. Some SSs that might be appropriate would include Astrology, Alchemy, Mathematics, Metallurgy, Natural Sciences, and Philosophy.

In High Fantasy games, or games featuring magicomechanical technology, Science Skills may become more prevalent. Specialization could develop as sages and scholars study the cultures of other races or delve in ruins for lost lore (Anthropology, Archaeology), examine the properties of different rocks and minerals (Mineralogy), expand upon healers' knowledge of herbs (Botany), or make systematic study of local animals (Zoology). Dwarvish and gnomish tinkerers might have some Engineering-related SSs. Similarly, a High Fantasy's wizard's approach to studying the world around him might rise to the level of Science Skills for many subjects.

Science Fiction

Every piece of "rubber science" (see page 146 of *Star Hero*) in a Science Fiction campaign should have an appropriate Science Skill associated with it. Some of the SSs a GM might create for his Science Fiction campaign include:

Dimensional Engineering: The science of interdimensional and time travel (the latter subject, by itself, is also known as Temporal Physics).

Force Field Physics: The science of force fields and the projection of fields of force for various purposes.

Hyperspace Physics: Sometimes known as Tachyonics or Warp Physics, this is the science of faster-than-light travel.

Memetics: The science of ideologies and mass manipulation (sometimes called socioengineering or psychoengineering).

Psionics: The study of mental powers and their applications.

Xenobiology: The study of alien life forms.

Xenology (or Xenoanthropology): The study of alien civilizations and societies.

SECURITY SYSTEMS

Type: Intellect Skill (roll: 9 + (INT/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

A character with this Intellect Skill can locate, recognize, disable/evade, build, and install various types of alarms and traps (referred to generally as "security devices"). He knows about the different types of security devices, their strengths and weaknesses, which ones are most suitable for a given situation, and the like. He also knows about the equipment and methods used to find and defeat security devices, including which tools work best against which types of devices and, if necessary, how to improvise tools.

Security Systems does not allow a character to pick or open locks, even electronic ones. That requires Lockpicking (see page 226).

Security Devices In The HERO System

The purpose of a security device is to prevent unauthorized persons from entering an area (such as a building). If the device can't stop the intruder altogether, it should detect the intrusion (and alert appropriate personnel) and/or attempt to harm the intruder (depending on the type of device). They range from the simple (fences and similar barriers) to some of the most advanced detection devices available in the setting. In most campaigns, the main use of the *Security Systems* Skill is to let a character enter a security device-protected area without being detected, stopped, and/or harmed.

Security devices have three defining characteristics: how they're triggered; how they hit the person who triggered them (*i.e.,* their OCV); and their effect.

TRIGGERING A SECURITY DEVICE

Security devices have many different types of triggering mechanisms. The simplest, such as concealed pits, projected missiles, or scything blades, are usually triggered by pressure (the weight of the victim walking on them) or a tripwire; they function mechanically. More advanced systems — electronic ones — can be triggered by all sorts of phenomena, such as sensors detecting the character's body heat or motion. If a character wants to pay Character Points for a trap, these are all forms of the *Trigger* Advantage (and may require a related Enhanced Sense to represent the device's sensors).

SECURITY DEVICE ATTACKS

Many security devices aren't intended to attack the person who activates them — they simply sound an alarm, or the like. But others (particularly primitive or mechanical ones) attempt to harm, restrain, or otherwise affect someone who "trips" them.

To determine if a security device hits its target, make an Attack Roll for it, pitting its OCV against the DCV of the person who triggered it (or against DCV 3, if it affects an area). The OCV of a security device depends on how well and cunningly it's made, as indicated in the accompanying Security Device OCV Table. Note that some security devices have an OCV of "Automatic," meaning they automatically hit the person who triggers them regardless of his DCV. This would include most pit traps, security devices in areas so confined the person who triggers them has no chance to avoid them, and so forth.

Unless characters are in combat when they trigger a security device, they cannot Abort to Dodge the security device unless the GM permits them to. Since most GMs don't track Phases out of combat, Aborting costs characters nothing and they'll do

SIMPLIFIED SECURITY SYSTEMS

If the detailed rules for Security Systems in this section are more than your campaign needs, you can instead use this simple system that groups security devices into various categories of quality:

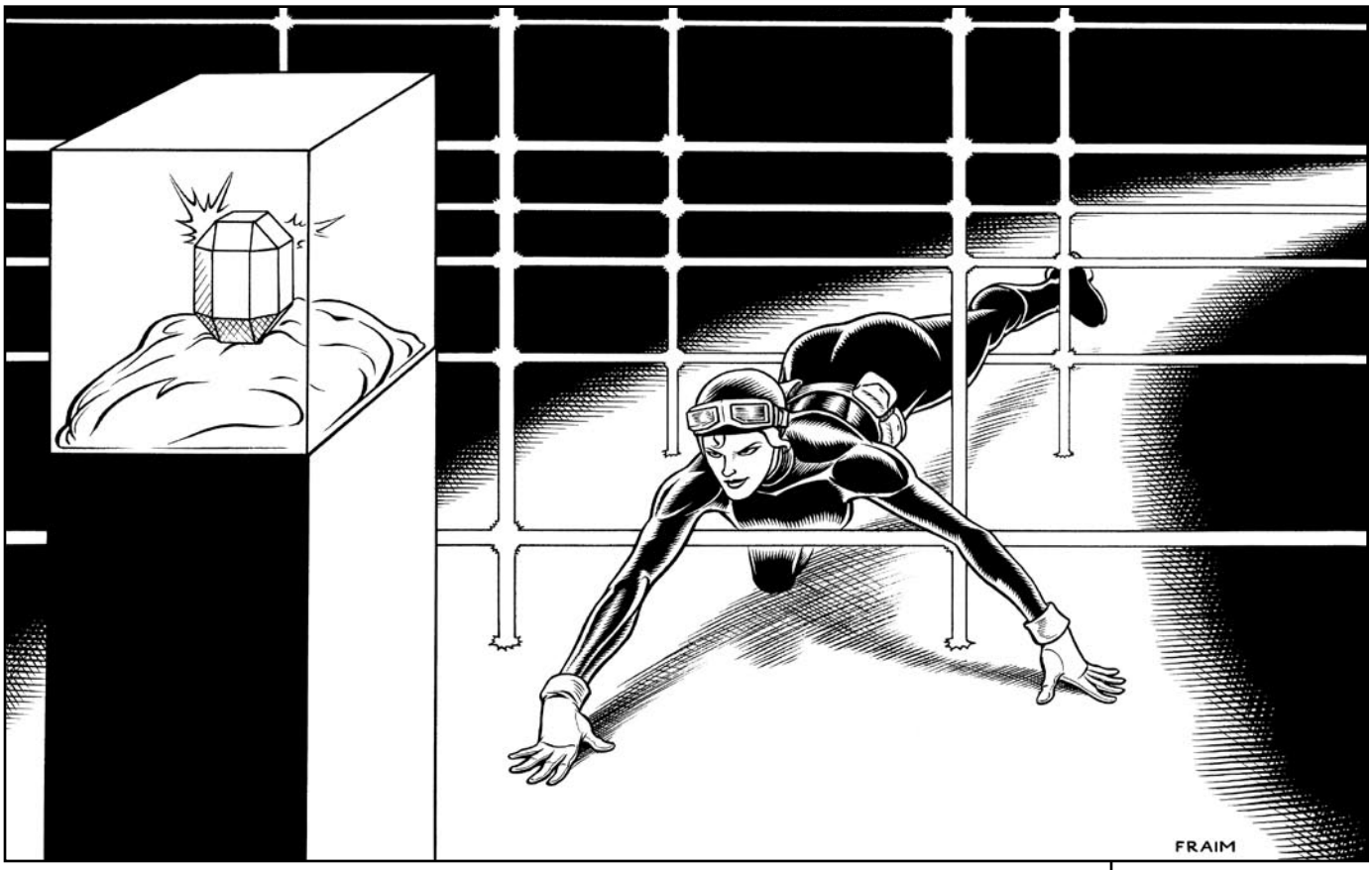
Security Systems Type Of Security Device	Security Systems Modifier	Roll
Poor quality	+1	8-
Average quality	-0 to -3	11-
Above Average quality	-4 to -5	14-
High quality	-6 to -7	17-
Very high quality	-8 to -9	20-
Superb quality	-10	23-

Alternately, if the GM prefers, he can require a Skill Versus Skill Contest to determine the outcome of using Security Systems — in other words, the quality of the security device (and thus the difficulty of bypassing or disarming it) is represented by giving the device a high Skill Roll. The table above indicates the standard roll representing various levels of quality.

SECURITY DEVICE OCV TABLE

Quality Of Security Device	OCV	Modifier To Create*
Poor	3	+2
Average	5	+0
High	7	-2
Very High	9	-4
Extremely High	11	-8
Superb	13	-16
Unbeatable	Automatic	-20

*: The GM may change the modifier to create a particular type of security device if doing so seems appropriate to him. For example, a device that emits knockout gas into a small, confined area might have an OCV of "Automatic" because anyone who triggers it can't possibly avoid the cloud of gas — but that doesn't necessarily mean it's a technologically-sophisticated device, so the GM might reduce the creation modifier accordingly.



it every time if allowed, making many traps useless. However, characters can assign any applicable Combat Skill Levels to DCV before taking an action they think may trigger a security device; this signifies being alert, aware, and prepared.

In most cases, a security device's OCV isn't something anyone pays Character Points for; it's just assigned to the device by the GM for ease of play. If characters want to install security devices in a Base (or anything else for which they pay Character Points), assume that all security devices start with Poor quality (OCV 3) for free. To increase a device's OCV, buy it 2-point Combat Skill Levels.

DAMAGE OR EFFECT

Most security devices have some pernicious effect; that's why they exist. Modern ones tend to function as alarms rather than attacks, but more primitive devices can cause harm. Some have relatively mild effects, such as confining the victim (either until someone comes to get him out or he starves to death) or knocking him unconscious. But most are deadly. They use poison, spikes, blades, long falls, or crushing weights to inflict lethal damage.

A confinement security device is usually defined as having BODY and DEF, though a few (such as nets) may qualify as straightforward Entangles. If the character can't break out, climb out, or otherwise escape, he remains trapped until released.

A knockout security device does STUN damage only, usually via a Drain STUN. If built as a poison, this may be an NND Drain STUN (the defense is the appropriate Life Support (Immunity)).

Lethal security devices do Normal or Killing Damage — usually Killing Damage. They may or may not target a specific part of the body; if so, they do not suffer any OCV penalty for the Hit Location, but inflict no extra damage because of it either (but you should reduce the damage for Locations that halve it). Poisoned security devices do NND Killing Damage (the defense is the appropriate Life Support (Immunity)).

Security Systems Basics

Characters primarily use Security Systems for three tasks: locating security devices; disabling/avoiding security devices; and installing security devices.

LOCATING SECURITY DEVICES

The first use of Security Systems in most situations is to find security devices — after all, a character can't disarm or avoid a device he's unaware of! In many cases, the GM should allow characters to locate security devices without a roll, because they're prominently placed as a way of discouraging intruders.

However, sometimes a device's designer wants to hide it — either he doesn't want intruders to know they've tripped an alarm, or the device is intended to harm anyone who tries to enter an area, open a locked object, or the like. In this case, the character has to make a Concealment roll to find the device; Security Systems serves as a Complementary Skill. (If the character doesn't have Concealment, he can make a Security Systems roll at -2 to find the device.)

SECURITY SYSTEMS MODIFIERS

Type Of System	Quality Of System: Poor	Average	High
Primitive/Mechanical			
Confinement Trap	-1	-2	-3
Deadfall	-2	-3	-4
Fence/Static Barrier	N/A	N/A	N/A
Gas/Dust Projector	-4	-5	-6
Locked Room/Moving Walls	-3	-4	-5
Missile Projector	-3	-4	-5
Nightingale Floor	N/A	N/A	N/A
Pin Projector	-3	-4	-5
Pit Trap	N/A	N/A	N/A
Recessed Hinges	N/A	N/A	N/A
Scything Blade	-2	-3	-4
Sliding Staircase	-2	-3	-4
Snare-Net	-0	-1	-2
Tripwire	+1	-0	-2
Advanced/Electronic			
Barometric sensor	-4	-6	-8
Camera			
Standard	-0	-1	-2
Infrared	-1	-2	-3
Ultraviolet	-1	-2	-3
X-ray	-2	-3	-4
Capacitance sensor	-2	-4	-6
Electric eyebeam, single			
Photoelectric	+1	-0	-1
Infrared	-0	-1	-2
Ultraviolet	-0	-1	-2
Laser	-0	-1	-2
Microwave	-1	-2	-3
Electric eyebeam, multiple			
Photoelectric	-0	-2	-4
Infrared	-1	-3	-5
Ultraviolet	-1	-3	-5
Laser	-1	-3	-5
Microwave	-2	-4	-6
Field sensors	-3	-5	-7
Fingerprint analyzer			
Standard	-3	-5	-7
Vitaprint analyzer	-3	-5	-7
Palmprint analyzer	-3	-5	-7
Infrared sensor	-3	-5	-8
Magnetic switch	+2	-0	-4
Metal detector	N/A	N/A	N/A
Mercury switch	-3	-5	-7
Microphone	-2	-4	-5
Motion detector	-3	-5	-8
Optical detector	-3	-5	-7
Plunger switch	+2	-0	-4
Pressure plate	-1	-3	-4
Proximity sensor	N/A	N/A	N/A
Radar			
Standard	N/A	N/A	N/A
Ground effect radar	N/A	N/A	N/A
Resonant cavity	-4	-6	-8
Retina scanner	-4	-6	-8
Seismic detector	-3	-5	-7
Sonar	N/A	N/A	N/A
Taut-wire switch	-0	-1	-2
Vibration sensor	-2	-4	-6
Voiceprint analyzer	-2	-4	-6
Window foil	+3	+1	-0
Window sensor	-2	-3	-4
Window wires	-4	-7	-9
Wired window tube	-4	-7	-9
X-ray scanner	N/A	N/A	N/A

The GM may want the roll to locate a security device to vary based on the skill with which it was installed. In this case the installer's Security System roll to properly install it becomes the target for the character to beat in a Skill Versus Skill Contest. Alternately, the GM can assign a penalty to finding a device to represent the skill with which it was installed, the nature of the device, or similar factors. The descriptions of various security devices below contains suggested modifiers for the roll to find them.

DISABLING/AVOIDING SECURITY DEVICES

After a character finds a security device, he can attempt to bypass, disable, or avoid it with a Security Systems roll (this is separate from the roll to find the device). For ease of reference, the term "disable" is used below to refer to any means of using the *Security Systems* Skill to avoid the effects of a security device, even if the character doesn't literally cause the device to not function or malfunction.

Generally speaking, the difficulty of disabling a security device depends upon (a) the type of device, and (b) the quality of the device. The Security Systems Modifiers table lists a wide variety of security devices and the penalties for each. Alternately, if a character uses Security Systems to try to disable a security device bought with Character Points, the GM can impose a flat penalty of -1 per 10 Active Points in the device, or use the Change Environment-based penalty purchased for it.

Complementary Skills for disabling security devices include Computer Programming, Electronics, and/or Mechanics, depending on the type of device.

BUILDING SECURITY DEVICES

Creating a security device requires the proper materials and tools. Some primitive devices, such as a deadfall, may require little more than an axe, rope, and the character's hands. Advanced electronic security devices may take days or weeks to create and require expensive components, tools, and Electronics rolls to Complement the Security Systems rolls.

As a general rule of thumb, assume that it takes 1 Hour per 10 Active Points in a security device to build it. For easier systems, including many primitive/mechanical ones, the GM can reduce this by taking steps up the Time Chart — 20 Minutes per 10 Active Points, 5 Minutes per 10 Active Points, and so on — or by otherwise altering the time required as he sees fit. If the character doesn't have the right materials or tools, doing the job should take longer.

INSTALLING SECURITY DEVICES

Installing security devices is normally an easy matter, assuming a character has the proper equipment. The GM should have the installer make a Security Systems roll and note the result. For every point he made the roll by, impose a -1 penalty on Security Systems rolls to bypass or disable the device (this penalty is cumulative with the penalty for the type of security device, up to a maximum of -10).

If the character installing a security device fails his roll, at the GM's option he may have gotten the device installed anyway — but so poorly that it's easier to defeat. For every point by which he missed the roll, reduce the penalty (or increase the bonus) to Security Systems rolls to defeat it by 1.

Types Of Security Devices

Here are descriptions of the security devices listed in the Security Systems Modifiers Table.

As you read over these devices, consider the three main levels of security: perimeter; building; and object. "Perimeter security" refers to devices such as fences that are intended to establish a perimeter around a facility and keep people from ever getting into it in the first place.

"Building security" refers to the systems protecting a specific building inside a perimeter from intrusion; "object security" protects one or more specific objects in that building. Some devices are suitable for certain levels of security but not others.

PRIMITIVE/MECHANICAL SYSTEMS

Primitive security devices operating on mechanical principles were the only security devices available prior to mankind's ability to harness electricity and build more sophisticated devices. Unlike advanced/electronic systems, which are primarily intended to alert someone to an intrusion, primitive/mechanical systems are often designed to restrain, injure, or kill an intruder. Thus their descriptions often include suggested OCVs, though this is not included in the cost (see above for how characters can buy this if desired). In some cases a full game description isn't necessary; the GM can adjudicate the results of the device on the character without it.

CONFINEMENT TRAP

Effect: Entangle 10d6, 5 DEF (standard effect: 10 BODY), Trigger, Only To Form Barriers
Target/Area Affected: One or more characters
Duration: Instant
Range: No Range
Charges: 1 Recoverable Charge
Breakability: 19 DEF

Description: When a victim triggers this trap (usually by stepping on a concealed plate or panel in the floor, but occasionally by touching or pulling on something), it causes walls to slam down around him, confining him. It's usually placed in corridors so the corridor walls form two sides, and the confining panels drop down from the ceiling to cut off a section of the hallway. The Damage/Effect above assumes stone walls; sometimes the trap uses metal portculli (DEF 7, BODY 6) instead.

Characters can escape the trap by hacking through the walls or lifting the confining walls. The walls typically have STR equal to five times their BODY, but the GM may vary this as he sees fit.

A person trapped under a falling confinement trap wall takes a number of dice of Normal Damage equal to the wall's BODY and is then pinned to the floor by the wall's STR (see above).

Game Information:

Cost	Power
19	*Confinement Trap:* Entangle 10d6, 5 DEF (standard effect: 10 BODY), Trigger (see text; +¼) (94 Active Points); IIF Immobile (-1¼), No Range (-½), Only To Form Barriers (-1), 1 Recoverable Charge (-1¼)
5	*Secured System:* Change Environment 1" radius, -2 on Security Systems rolls, Reduced Endurance (0 END; +½), Persistent (+½) (16 Active Points); IIF Immobile (-1½), Self Only (only affects attempts to find or neutralize the system itself; -½), No Range (-½)

Total cost: 24 points.

Options:

1) Metal Portcullis: Change to Entangle 6d6, 7 DEF. 81 Active Points, total cost 16 points; total cost of device 21 points.

2) More Secure Device: This type of confinement trap is harder to bypass or defeat. Change to -3 on Security Systems rolls. 22 Active Points (total cost 6 points); total cost of device 25 points.

3) Less Secure Device: This type of confinement trap is easier to bypass or defeat. Change to -1 on Security Systems rolls. 10 Active Points (total cost 3 points); total cost of device 22 points.

DEADFALL

Effect: Drops heavy object on character; see text
Target/Area Affected: One character
Duration: Instant (see text)
Range: No Range
Charges: 1 Recoverable Charge
Breakability: Varies

Description: A deadfall is a trap that drops one or more large, heavy objects onto the person triggering it. The typical example is a large block of stone or a tree trunk. If the object hits the victim, he takes a number of dice of Normal Damage equal to the STR needed to lift the object and is crushed beneath the object. (The GM decides how heavy the object is based on its size, composition, and so forth.) He takes the same number of dice of damage every Segment 12 thereafter until he wins free or dies. If the weight hits with a sharp or pointed end, convert the initial damage to the same number of DCs of Killing Damage. In the case of some extremely heavy weights, the GM may have a deadfall do large amounts of NND Killing Damage — blunt or not, a 50-ton boulder should crush just about anyone it falls on.

A deadfall typically has an OCV of 11. Some deadfalls drop objects so large they cover an entire area. These attack against DCV 3, and can hit, hurt, and crush multiple persons.

FENCE

Effect: Static barrier with DEF and BODY
Target/Area Affected: Varies
Duration: Persistent
Range: No Range
END Cost: 0
Breakability: Varies

Description: Fences, walls, and similar "static barriers" are the primary form of perimeter defense for many facilities — a means of keeping people out without necessarily hurting them. A fence has DEF and BODY based on its materials, thickness, and other qualities; see pages 447-49 of *The HERO System 5th Edition, Revised* rulebook or page 111 of *The Ultimate Brick* for more information. For example, a brick wall usually has about 5 DEF, 3-9 BODY per hex; a chain-link fence usually has about 5 DEF, 2 BODY per hex.

Modern fences may have alarms attached to them to detect the usual methods of avoiding them — tunneling under, climbing over, or cutting through. Some systems even detect when a person simply gets close to the fence! Some "electric fences" may simply be wired as an alarm, others have potentially lethal voltage running through them (inflicting a Continuous RKA on anyone who touches or grabs the fence).

GAS/DUST PROJECTOR

Effect: RKA 3d6, NND, Does BODY
Target/Area Affected: 3" Radius
Duration: Constant (see text)
Range: No Range
Charges: 1 Continuing Charge lasting 1-3 Segments
Breakability: 47 DEF

Description: This trap consists of a tiny tube or container filled with poisonous gas or dust. When the victim triggers it (usually by trying to open a lock without the proper key), the gas or dust puffs out, filling a 3" radius area (attacking with OCV 7 against DCV 3). Only persons with appropriate forms of Life Support (Self-Contained Breathing or appropriate Immunity) can resist the effects. The cloud lingers for 1-3 Segments, or less in areas of high wind, rain, or the like.

Game Information:

Cost	Power
50	*Poison Gas Projector:* RKA 3d6, Area Of Effect (3" Radius in front of projector; +1), NND (defense is Life Support [Self-Contained Breathing or appropriate Immunity]; +1), Does BODY (+1), Continuous (+1), Trigger (failure to open lock properly or with Lockpicking roll; +¼) (236 Active Points); OIF Immobile Fragile (-1¾), No Range (-½), 1 Continuing Charge lasting up to 3 Segments (-1½)
10	*Secured System:* Change Environment 1" radius, -5 on Security Systems rolls, Reduced Endurance (0 END; +½), Persistent (+½) (34 Active Points); OIF Immobile (-1½), Self Only (only affects attempts to find or neutralize the system itself; -½), No Range (-½)

Total cost: 60 points.

Options:

1) Disguised System: Change OIF Fragile Immobile (-1¾) to IIF Fragile Immobile (-1½). Total cost: 52 + 10 = 62 points.

2) More Secure Device: This type of gas projector is harder to bypass or defeat. Change to -6 on Security Systems rolls. 40 Active Points (total cost 11 points); total cost of device 61 points.

3) Less Secure Device: This type of gas projector is easier to bypass or defeat. Change to -4 on Security Systems rolls. 28 Active Points (total cost 8 points); total cost of device 58 points.

4) Knockout Gas: This form of the trap isn't lethal, it just knocks the victim out. Change to Drain STUN 6d6 and remove Does BODY (+1) and No Range (-½). 240 Active Points; total cost 56 points; total cost of overall device 66 points.

LOCKED ROOM AND MOVING WALLS

Effect: 6d6+ Normal Damage (see text)
Target/Area Affected: One enclosed area (see text)
Duration: Constant
Range: No Range
Charges: 1 Recoverable Charge
Breakability: Varies based on type of wall, but usually at least 5 DEF

Description: This trap confines the victims, then kills them. It requires an enclosed space — a room or corridor, typically. The victims usually trigger it by touching, pushing, or pulling some object they shouldn't. This causes walls to fall from the ceiling or slide out from the walls (as with a Confinement Trap, above). The walls span the corridor or each side of the room. Two Segments after the walls are in place, they begin to slide toward each other at the rate of about 1/3" per Segment. Since they fill the corridor or room from side to side, there's no way around them — the victim has to stop them from moving, or deactivate the trap, if he wants to live.

The sliding walls typically have STR 40 or more, so stopping them is difficult. If they encounter resistance (including characters trapped between them when they get close), they do 6d6 Normal Damage to the resisting objects or characters that Segment. The next Segment, they do 7d6; the next, 8d6; and so forth (adding +1d6 per Segment) until everyone between them is crushed into a bloody paste.

MISSILE PROJECTOR

Effect: RKA 1d6, Trigger
Target/Area Affected: 8" Line
Duration: Instant
Range: No Range
Charges: 1 Recoverable Charge
Breakability: 7 DEF

Description: Trap designers usually install this trap behind a wall or the like, leaving concealed openings through with the arrows (or darts) project. When the victim triggers the trap, the arrows fire at him. Typically the triggering mechanism is a concealed plate or panel in the floor, but it could also be a tripwire, failure to open or pick a lock, or the like. The trap usually has an OCV of 7.

Game Information:

Cost	Power
8	*Missile Projector:* RKA 1d6, Area Of Effect (8" Line; +1), Trigger (see text; +¼) (34 Active Points); OIF Immobile (-1½), No Range (-½), 1 Recoverable Charge (-1¼)
8	*Secured System:* Change Environment 1" radius, -4 on Security Systems rolls, Reduced Endurance (0 END; +½), Persistent (+½) (28 Active Points); OIF Immobile (-1½), Self Only (only affects attempts to find or neutralize the system itself; -½), No Range (-½)

Total cost: 16 points.

Options:

1) Poisoned Missiles: Sometimes a missile projector's designer coats the darts or arrows with a vicious poison. Also buy: RKA 3d6, Area Of Effect (8" Line; +1), NND (defense is Life Support [appropriate Immunity]; +1), Does BODY (+1), Trigger (+¼) (191 Active Points); OIF Fragile Immobile (-1¾), Dart/Arrow RKA Must Do BODY (-½), Linked (to dart/arrow RKA; -¼), No Range (-½), 1 Recoverable Charge (-1¼). Total cost 36 points; total cost of device 52 points.

2) Disguised System: Change OIF Immobile (-1½) to IIF Immobile (-1¼). Total cost: 8 + 9 = 17 points.

3) More Secure Device: This type of missile projector is harder to bypass or defeat. Change to -5 on Security Systems rolls. 34 Active Points (total cost 10 points); total cost of device 18 points.

4) Less Secure Device: This type of missile projector is easier to bypass or defeat. Change to -3 on Security Systems rolls. 22 Active Points (total cost 6 points); total cost of device 14 points.

NIGHTINGALE FLOOR

Effect: Change Environment (-2 to Stealth rolls)
Target/Area Affected: 4" Radius
Duration: Persistent
Range: No Range
END Cost: 0
Breakability: 7 DEF

Description: For security purposes, floors are sometimes *deliberately* designed to squeak loudly whenever someone walks over them. Getting past one requires a Stealth roll at -2; the GM may allow a Security Systems roll as Complementary if appropriate. Characters can sometimes defeat a nightingale floor by putting a lot of padding over it, or artificially bridging over it somehow.

Game Information: *Change Environment 4" radius, -2 to Stealth rolls, Reduced Endurance (0 END; +½), Persistent (+½) (36 Active Points); OIF Immobile (-1½), No Range (-½). Total cost: 12 points.*

PIN PROJECTOR

Effect: RKA 1 point, Armor Piercing, Trigger + RKA 3d6, NND, Does BODY
Target/Area Affected: One character
Duration: Instant
Range: No Range
Charges: 1 Recoverable Charge
Breakability: 2 DEF

Description: This trap, built into a lock or door handle, uses a powerful concealed spring to project a sharp, poison-coated pin into the victim's hand. Unless he's wearing some heavy form of protection on his hands (some type of Hardened Resistant Defense), he's likely to be poisoned... though he may jerk his hand away in time if he's fast (*i.e.,* if he has a high enough DCV that the trap misses him). The trap usually has an OCV of 11 or higher, or the GM may rule that it hits automatically.

Game Information:

Cost	Power
30	*Poisoned Pin Projector:* RKA 1 point, Armor Piercing (+½), Trigger (failure to open lock properly or with Lockpicking roll; +¼) (9 Active Points); IIF Immobile (-1¼), No Range (-½), 1 Recoverable Charge (-1¼) plus RKA 3d6, NND (defense is Life Support [appropriate Immunity]; +1), Does BODY (+1), Trigger (see above; +¼) (146 Active Points); OIF Fragile Immobile (-1¾), Pin RKA Must Do BODY (-½), Linked (to pin RKA; -¼), No Range (-½), 1 Recoverable Charge (-1¼)
9	*Secured System:* Change Environment 1" radius, -4 on Security Systems rolls, Reduced Endurance (0 END; +½), Persistent (+½) (28 Active Points); IIF Immobile (-1¼), Self Only (only affects attempts to find or neutralize the system itself; -½), No Range (-½)

Total cost: 39 points.

Options:

1) More Secure Device: This type of pin projector is harder to bypass or defeat. Change to -5 on Security Systems rolls. 34 Active Points (total cost 10 points); total cost of device 40 points.

2) Less Secure Device: This type of pin projector is easier to bypass or defeat. Change to -3 on Security Systems rolls. 22 Active Points (total cost 7 points); total cost of device 37 points.

PIT TRAP

Effect: Fall into pit, possibly one filled with something dangerous
Target/Area Affected: One or more characters
Duration: Persistent
Range: No Range
END Cost: 0
Breakability: Varies, but usually 3-5 DEF

Description: This trap consists of a simple pit in the ground, usually covered by a trapdoor or the like. If the victim steps on the cover, or doesn't watch where he's going, he falls in. At the GM's option, the victim can make a DEX Roll at -2 (plus any Encumbrance penalties or other appropriate modifiers) to catch the edge of the pit and hang on for dear life.

A character who falls into a pit suffers falling damage, usually for a short fall (see page 434 of *The HERO System 5th Edition, Revised*). Some pits have spikes at the bottom, in which case the damage becomes an equivalent number of DCs of Killing Damage. Other pits have water, acid, or monsters in them.

RECESSED HINGES

Effect: Penalties to Security Systems and/or Lockpicking
Target/Area Affected: One door
Duration: Persistent
Range: No Range
END Cost: 0
Breakability: Varies, but usually at least 5 DEF

Description: Characters trying to get through a door often try to do so by removing the pins in the door's hinges, thus allowing them to lift the door out of the jamb and gain access to whatever it was protecting. The easiest way to avoid this is to design the door so it opens inwards (meaning the hinges are on the inside, where intruders can't get at them), recess the hinges so they can't be reached, or to cap the hinge pin so it can't be removed. Similarly, hinge bolts (pins that project from the inner edge of the door into the jamb, similar to a deadbolt lock) can protect against ramming the door, as can door bars.

Similar to this are what security specialists call "air-lock doors" — a system of two doors in sequence where the second cannot be opened until the first is shut. Usually the two are close together, thus creating a tiny area where an intruder remains confined if a security device on either door triggers an alarm. Some air-lock systems even have special sensors to detect if more than one person is in the secured area at the same time, which it takes as an indicator of a possible hostage situation and causes it to shut down the doors.

In game terms, recessed hinges are part of the "secured system" modifiers applied to the door, and should be bought accordingly (they may also apply to Lockpicking, which can count as a Complementary Skill for attempts to bypass or disassemble recessed hinges if the GM rules that's even possible). An air-lock system typically involves high-DEF, high-BODY walls and doors together with advanced sensors (such as some of the systems described below).

SCYTHING BLADE

Effect: RKA 3d6, Trigger
Target/Area Affected: One character
Duration: Instant
Range: No Range
Charges: 1 Recoverable Charge
Breakability: 11 DEF

Description: This trap consists of a large blade that swings, slices, jabs, or projects out of a concealed notch in a wall, ceiling, or floor to hit the victim. Usually a tripwire triggers it, though some activate via a pressure plate in the floor or failure to open a door properly. The blade may be poisoned, and usually attacks with an OCV of 9.

You can also use this trap to represent spiked springing logs in forest scenarios.

Game Information:

Cost	Power
14	*Scything Blade:* RKA 3d6, Trigger (see text; +¼) (56 Active Points); IIF Immobile (-1¼), No Range (-½), 1 Recoverable Charge (-1¼)
7	*Secured System:* Change Environment 1" radius, -3 on Security Systems rolls, Reduced Endurance (0 END; +½), Persistent (+½) (22 Active Points); IIF Immobile (-1¼), Self Only (only affects attempts to find or neutralize the system itself; -½), No Range (-½)

Total cost: 21 points.

Options:

1) More Secure Device: This type of scything blade is harder to bypass or defeat. Change to -4 on Security Systems rolls. 28 Active Points (total cost 9 points); total cost of device 23 points.

2) Less Secure Device: This type of scything blade is easier to bypass or defeat. Change to -2 on Security Systems rolls. 16 Active Points (total cost 5 points); total cost of device 19 points.

3) Poisoned Blade: Sometimes a scything blade's designer coats the blade with a vicious poison. Also buy: RKA 3d6, NND (defense is Life Support [Self-Contained Breathing or appropriate Immunity]; +1), Does BODY (+1), Trigger (see above; +¼) (146 Active Points); IIF Fragile Immobile (-1½), Blade RKA Must Do BODY (-½), Linked (to blade RKA; -¼), No Range (-½), 1 Recoverable Charge (-1¼). Total cost 29 points; total cost of device 50 points.

SLIDING STAIRCASE

Effect: Victim slides down stairway
Target/Area Affected: One or more characters
Duration: Instant
Range: No Range
END Cost: 0
Breakability: Varies

Description: This trap, installed in a staircase and triggered by weight on the stairs, causes the stairs to fold down into a slippery ramp. Anyone on the stairs slides down the ramp, usually into a pit that opens up at the foot of the stairs, but sometimes into a concealed tunnel or just back down to the floor. Impact with the floor, or having other characters land on him, may cause a character to suffer a few dice of Normal Damage.

Characters trapped on a sliding staircase typically slide one floor's worth of distance per Segment (some sliding stairs are steeper). If the character has a Phase in a Segment, he can attempt a STR Roll to keep from sliding. If he succeeds, he's found a way to halt his slide; otherwise he keeps going.

SNARE-NET

Effect: Entangle 4d6, 4 DEF
Target/Area Affected: 2" Radius
Duration: Instant
Range: No Range
Charges: 1 Recoverable Charge
Breakability: 16 DEF

Description: Usually found in woodland areas, this trap consists of a net placed on the ground and concealed beneath a layer of leaves and brush. The net connects to bent-over springy saplings, or a deadfall weight, via concealed ropes. When a victim steps into the net, the captor (who stays nearby and watches the trap if it's not set up for automatic effect) hits the trigger, causing the saplings or deadfall weight to pull the net up and around the victim, trapping him in midair. The net covers a 2" radius area on the ground, so it may catch more than one person.

Game Information:

Cost	Power
27	*Snare-Net:* Entangle 4d6, 4 DEF, Area Of Effect (One Hex Doubled; +¾), Trigger (see text; +¼) (80 Active Points); IIF Immobile (-1¼), No Range (-½), 1 Recoverable Charge (-1¼)
3	*Secured System:* Change Environment 1" radius, -1 on Security Systems rolls, Reduced Endurance (0 END; +½), Persistent (+½) (10 Active Points); IIF Immobile (-1¼), Self Only (only affects attempts to find or neutralize the system itself; -½), No Range (-½)

Total cost: 30 points.

Options:

1) More Secure Device: This type of snare-net is harder to bypass or defeat. Change to -2 on Security Systems rolls. 16 Active Points (total cost 5 points); total cost of device 32 points.

TRIPWIRE

Effect: Trigger a security device
Target/Area Affected: Varies
Duration: Instant
Range: No Range
Charges: 1 Charge
Breakability: 0 DEF

Description: A tripwire is a taut string, rope, wire, or cable that, when pulled or broken, triggers an alarm (whether a low-tech one, like pots and pans that rattle, or a high-tech one) or a harmful security device (such as a deadfall, a grenade, or the like). Defeating a tripwire is usually a simple matter of avoiding it (such as by stepping over it), or in some cases cutting it without applying significant pressure. But that means the character has to perceive it, and most tripwires blend into the background (characters must make a PER Roll at -1 to -3, depending on the circumstances; a Security Systems roll is Complementary).

High-tech tripwires may include fiber optic cable. If the cable's broken or cut in any way, it triggers the alarm. (This method also works for fences, concertina wire, or the like with fiber optic cable woven into or through them, and can be used to protect individual objects by wrapping a fiber optic cable around them.) Defeating a fiber optic cable requires a splice kit, and even then the penalties increase by -4.

ADVANCED/ELECTRONIC SYSTEMS

Electronic security devices usually consist of three parts: the controller (which contains the zone information, backup batteries with a 2-72 hour lifespan [depending on the quality and age of the device], and a connection to the power supply); the panel (the control panel or console from which the device can be turned on and off, monitored, or the like); the detector (the sensors that detect whatever it is they're designed to detect in the zone designated for that device); and the annunciator (the alarm, be it a visible light or audible siren, or a silent "alarm" that alerts someone at a remote location). Panels are typically mounted near entrances, and a single alarm system can have multiple panels. Destroying a panel may trigger the alarm, or may do nothing at all. Detectors can be put anywhere; many alarm systems have multiple detectors.

Controllers are usually in a safe place, like the basement of a house or the security office of a building, so that one cannot access them without getting past the device itself first. Disabling a controller may be as simple as disconnecting it from the power supply and removing its backup batteries; this shuts off its alarm system altogether. The rules below assume that characters using Security Systems are trying to neutralize or bypass a security device without having access to its controller. If characters can access the controller, shutting off or "fooling" a security device may be much easier.

Electronic security devices come in three basic types: wireless (in which the detector uses radio waves to communicate with the control-

FALSE ALARMS

Sometimes it's possible for characters who want to penetrate a secured area but have no reliable means of defeating the security devices to trick the people inside the secured area to do the job for them. If they can arrange enough false alarms, the people monitoring the system may get so tired of the alarms that they shut the device off, or assume it's malfunctioning and remove it for a while. However, a sudden rise the incidence of false alarms may itself tip off the people monitoring the system that someone is trying to get inside the secured area.

SECURING THE CABLES

Most electronic security devices depend to some extent on signal cables — electric wiring that carries the signals the system uses to sound the alarm. To protect the cables from tampering, a high-security facility can install them in conduits. The two types of conduits most often used are electrical metallic tubing (EMT) and heavy wall conduit. If an attempt to defeat a security system involves getting at the signal cables, EMT imposes an additional -2 penalty to the Skill Roll, while heavy wall conduit imposes a -3. In either case, the GM should cap the overall penalty at -9 in most situations.

ler); hardwired (in which physical wires connect the detector to the controller); and self-contained (which have all parts in a single unit). Wireless models may be vulnerable to some Sense-Affecting Powers, such as Darkness or Flash, that affect the Radio Sense Group, but may be designed to register an alarm if anything interferes with them that way.

Most electronic security devices have what's called a closed circuit — a closed loop of electronic sensors. Break that loop (while, for example, trying to deactivate the device surreptitiously...), and you trigger the alarm. In a cheap system or one of poor quality, a character who knows how can neutralize the device by shorting the output (Electronics acts as a Complementary Skill to Security Systems for this). Systems of higher quality are set to a particular resistance; any change in that resistance activates the alarm.

Security devices can have many different types of alarms: blaring sirens; flashing lights; or no indication that they've been triggered at all. Some automatically alert specific guards, the police, the fire department, or someone else; others simply sound a general alarm. Some use standard phone lines to alert the authorities; others have dedicated phone lines or are wireless (radio or cellular communications, or in rare cases satellite communications). Sometimes cutting the line of communications effectively neutralizes a security device without alerting anyone. Cutting a dedicated line usually alerts the authorities monitoring it immediately; interfering with wireless communications may not work if the device is being monitored at the time. On the other hand, if the person assigned to monitor the system sends a verification signal, it may take him long enough to get "no response" that the characters trying to avoid security can get in, do what they want to do, and get out safely.

In a facility with multiple security devices, those devices usually feed to a central processor that controls them and responds in specific ways if they're triggered. Since disabling the processor neutralizes the entire security device network, the processor is usually in a *highly* secure area, and often has its own security devices to protect it.

Many security devices have their own specific security devices to prevent tampering with them. If so, characters can't work on defeating the security device until they've defeated its dedicated security system, and that requires a separate Security Systems roll (usually at a modifier equal to half that of the device, but sometimes equal to the device's full modifier). To save time, the GM may collapse the two rolls into one by increasing the security device's modifier by -1 (or more, if appropriate).

In a pinch, characters can defeat many of the security devices described below simply by breaking them. However, that in and of itself usually alerts the guards or triggers the alarm — but clever characters may still have enough time to do whatever they came to do before security forces can mobilize.

Dual Systems

To make a security system more difficult to defeat, the designer often incorporates two types of sensors into one device — such as motion detection and passive infrared, or a passive IR system with a microphone. The GM can require the character to roll twice to defeat such a device, or he can just call for one roll. In the latter case, use the worst modifier of the two (*i.e.,* the one that penalizes Security Systems rolls the most), but increase it to account for the dual system.

Standby Power Sources

Electronic security systems require electricity to work. Normally the electricity comes from whatever source the facility the systems protect comes from — a generator, the local power grid, or the like. This may leave them vulnerable to blackouts or deliberate tampering. To avoid or minimize this problem, some security systems have standby batteries that can power them for about two to six hours (and in some cases, up to 72 hours) if something interrupts the external power source. Low temperatures (freezing or below) may reduce battery life, and can even cause some batteries not to function at all.

Advanced Security Devices In *HERO System* Terms

The *HERO System* writeups for the devices described below assume the devices are bought as part of a relatively large Base, and in some cases that the device only covers a specific area. You can adjust this as necessary for other situations, or reduce the *Only Within Defined Area* Limitation to its proper value based on the size of the Base. None of them are bought with OCV bonuses (see above) because modern security devices usually just trigger alarms, not lethal traps.

The penalties listed in the Security Systems Modifiers table are bought as a form of Change Environment (bonuses are bought as a Limitation on the power) using the "Average quality" modifier from the table. This primarily reflects the modifier to disable, bypass, or otherwise neutralize the device without setting it off or otherwise alerting anyone who might be monitoring it. It also represents the difficulty of disarming or bypassing any alarm on the security device itself.

For the Disguised versions of the devices, the GM can apply whatever penalty he wants to Security Systems rolls to find the device, based on the circumstances — sometimes the entire listed penalty is appropriate, sometimes only half the listed penalty (or some other percentage of the full penalty), and sometimes no penalty at all (perhaps because the device was poorly installed, the character knows exactly where to look for it, or the person who installed it *wants* it to be obvious).

These security devices are bought as Breakable, Inaccessible Foci. However, reaching them to break them or remove them from whatever they're attached/built in to may prove extremely difficult.

BAROMETRIC SENSOR

Effect: Detect Changes In Barometric Pressure 16-
Target/Area Affected: Self (6" x 6" protected area)
Duration: Persistent
Range: Self (6" x 6" protected area)
END Cost: 0
Breakability: 8 DEF

Description: Barometric sensors are security devices that are very sensitive to barometric pressure. They're used to guard a room or other enclosed space — when someone opens a door or window into the area, the pressure changes and the alarm activates. Defeating them is difficult (at best); it requires the characters to somehow equalize the pressure between the guarded area and the area they want to enter it from.

Game Information:

Cost	Power
2	*Barometric Sensor:* Detect Changes In Barometric Pressure 16- (no Sense Group) (10 Active Points); OIF Immobile (-1½), Only Within Defined Area (6" x 6" or smaller; -2)
8	*Secured System:* Change Environment 1" radius, -4 on Security Systems rolls, Reduced Endurance (0 END; +½), Persistent (+½) (28 Active Points); OIF Immobile (-1½), Self Only (only affects attempts to find or neutralize the system itself; -½), No Range (-½)

Total cost: 10 points.

Options:

1) High-Quality System: Increase to Detect Changes In Barometric Pressure 18-. 12 Active Points, total cost 3 points; total cost of device 11 points.

2) Poor-Quality System: Decrease to Detect Changes In Barometric Pressure 14-. 8 Active Points, total cost 2 points; total cost of device 10 points.

3) Disguised System: Change OIF Immobile (-1½) to IIF Immobile (-1¼). Total cost:

Standard: 2 + 9 = 11 points.
High-Quality: 3 + 9 = 12 points.
Poor-Quality: 2 + 9 = 11 points.

CAMERAS

Effect: Clairsentience (Sight Group)
Target/Area Affected: Fixed Perception Point
Duration: Constant
Range: 300"
END Cost: 0
Breakability: 8 DEF

Description: Closed-circuit television (CCTV) camera systems are a standard security measure in most secured facilities. They send images back to a central monitoring station (or sometimes more than one), thus allowing a single guard to keep watch over a large area. Some are fixed-position (they always show the same scene from the same angle); others pan back and forth across a fixed range (and thus only show part of their overall "field of vision" to the monitors at any given time). Both types are built as Clairsentience (Sight Group); it's just that a panning camera changes its angle of view occasionally (similar to a character standing in place and turning back and forth). This doesn't require Mobile Perception Point, but the *Fixed Perception Point* Limitation is reduced to -¾ to represent the greater utility of a panning camera.

While most cameras are standard ones that use normal light, more advanced models are available. These use infrared light (or thermographic sensors), ultraviolet light, or even X-rays to improve their ability to detect unwanted intruders. Some have zoom lenses, image intensification features, and other systems designed to improve their performance.

There are many ways to defeat a camera system. First, characters can avoid being seen by them — they can remain in locations not covered by cameras, or move past a camera that pans when it's not pointed directly at them. In the case of multiple-camera systems, it's possible that a given camera's image only appears on the monitor for a few seconds each minute, creating a window of "blindness" characters can exploit (particularly if the persons watching the monitor aren't very attentive). For these methods, the GM may require an unmodified Security Systems roll to analyze the cameras' "viewing pattern," then a Stealth roll (at the penalty listed on the table) to move past them without being seen. Each person moving past the cameras has to make the roll, and must roll once per camera he attempts to avoid. (In the interest of speeding up game play, the GM may condense multiple rolls into one.)

Second, with the right equipment, a character who can get close to a camera may be able to tap into it and "loop" the feed so that it continues to show an empty area even as the characters walk right past the camera. (If the character comes prepared with the right equipment a loop can show something else; an undisturbed area is just the most common trick.) This requires a Security Systems roll at *twice* the listed penalty (but usually capped at -9). But even if the character succeeds, some systems are monitored by computers, and the computers notice if the image shown differs from one stored in memory or has been tampered with. Dis-

abling this function may not be possible; if it is, it requires the appropriate equipment and a separate Security Systems roll at the listed penalty. (The GM may also require a Computer Programming roll at the listed penalty.)

Depending on a camera's resolution, lens speed, and signal-to-noise ratio, the ambient light in the area being filmed, and other factors, characters may suffer PER Roll penalties of -1 or more when viewing through cameras or watching film.

Facilities trying to save money on their security devices may install fake cameras. A character can spot a fake camera with an unmodified Security Systems roll (though the Range Modifier applies if the character has to examine the device from a distance).

Game Information:

Cost	Power
11	*Security Camera (Stationary):* Clairsentience (Sight Group), x2 Range (300"), Reduced Endurance (0 END; +½) (37 Active Points); OIF Immobile (-1½), Fixed Perception Point (-1)
11	*Security Camera (Panning):* Clairsentience (Sight Group), x2 Range (300"), Reduced Endurance (0 END; +½) (37 Active Points); OIF Immobile (-1½), Fixed Perception Point (-¾)
3	*Secured System:* Change Environment 1" radius, -1 on Security Systems rolls, Reduced Endurance (0 END; +½), Persistent (+½) (10 Active Points); OIF Immobile (-1½), Self Only (only affects attempts to find or neutralize the system itself; -½), No Range (-½)

Total cost: 14 points (either version)

Options:

1) CCTV Security System: Instead of just one camera, the character has multiple cameras installed at various points around a facility. Add Multiple Perception Points (up to 8), Perception Point Cannot Move Through Solid Objects (-0).

Stationary: 60 Active Points, 17 Real Points; total cost of system 17 + 3 = 20 points.

Panning: 60 Active Points, 18 Real Points; total cost of system 18 + 3 = 21 points.

2) Zoom Lens/Digital Zoom: The camera comes equipped with systems that extend its range of view. Alternately, the system has "digital zoom" software that lets the user expand a section of an image to focus in on it and view it more precisely. Change to x4 Range (600").

Stationary: 45 Active Points, 13 Real Points; total cost of system 13 + 3 = 16 points.

Panning: 45 Active Points, 14 Real Points; total cost of system 14 + 3 = 17 points.

3) Infrared Lens: The camera can also take pictures using infrared light. Increase the *Secured System* to -2 to Security Systems rolls (16 Active Points, total cost 5 points) and add Infrared Perception (Sight Group), OIF Immobile (5 Active Points; total cost 2 points). Final total cost (for either stationary or panning version: 11 + 2 + 5 = 18 points.

4) Ultraviolet Lens: The camera can also take pictures using ultraviolet light. This costs the same as the Infrared Lens, but add Ultraviolet Perception (Sight Group) instead of Infrared Perception.

5) Nightsight Lens: The camera comes equipped with light-amplification technology so that it can see even in the darkest night. This costs the same as the Infrared Lens, but add Nightvision (Sight Group) instead of Infrared Perception.

6) X-Ray Lens: Some CCTV systems, such as those used for screening luggage at airports, don't work at range but are linked with x-ray technology to see inside objects. This is bought as N-Ray Perception (Sight Group; stopped by lead, gold, or force fields) (10 Active Points); OIF Immobile (-1½), No Range (-½) (total cost: 3 points) plus the *Secured System* feature with -3 to the roll (22 Active Points; total cost 6 points). Total cost: 10 + 22 = 32 Active Points, 3 + 6 = 9 Real Points.

7) Disguised System: Modern technology makes it possible to conceal a camera just about anywhere (though the ideal hiding place is an object people look at directly, such as a television). Despite their tiny size, concealed cameras can often function for months without maintenance, shoot and store hundreds or thousands of pictures, and be operated by a variety of means (manual, remote, sensor-triggered, and the like). Change OIF Immobile (-1½) to IIF Immobile (-1¼). Total cost:

Stationary

Standard: 37 Active Points, 11 Real Points for Security Camera and 10 Active Points, 3 Real Points for Secured System; total cost of system 11 + 3 = 14 points.

Zoom: 45 Active Points, 14 Real Points; total cost of system 14 + 3 = 17 points.

IR, UV, or Nightsight: 37 Active Points, 11 Real Points for Security Camera, 5 Active Points, 2 Real Points for Lens, and 16 Active Points, 5 Real Points for Secured System; total cost of system 11 + 2 + 5 = 18 points.

Panning

Standard: 37 Active Points, 12 Real Points for Security Camera and 10 Active Points, 3 Real Points for Secured System; total cost of system 12 + 3 = 15 points.

Zoom: 45 Active Points, 15 Real Points; total cost of system 15 + 3 = 18 points.

IR, UV, or Nightsight: 37 Active Points, 12 Real Points for Security Camera, 5 Active Points, 2 Real Points for Lens, and 16 Active Points, 5 Real Points for Secured System; total cost of system 12 + 2 + 5 = 19 points.

8) Video Motion Detection: Some security camera technology comes programmed with the ability to detect motion. They do this on the basis of contrast change, so they work best indoors (where lighting conditions can be controlled) and generally aren't suitable (or function with a -1 or greater PER Roll penalty) outdoors or in other areas that tend to



experience frequent lighting changes. These systems also buy a Motion Detector (see below) but based on the Sight Group rather than Radio Group.

9) Recording Device: Many cameras record what they see on tape or disk. Camera also buys Eidetic Memory (5 Active Points); OIF Immobile (-1½), Visual Only (-1). Total cost 1 point.

CAPACITANCE SENSOR

Effect: Detect Change In Capacitance 14-
Target/Area Affected: Self
Duration: Persistent
Range: Self
END Cost: 0
Breakability: 8 DEF

Description: This type of security device is designed to protect objects (such as an artifact on display at a museum). It runs a low electrical current through the object; anyone touching the object changes the capacitance, which triggers an alarm. They're sensitive and difficult to defeat.

Game Information:

Cost	Power
3	*Capacitance Sensor:* Detect Change In Capacitance 14- (Radio Group) (8 Active Points); OIF Immobile (-1½), No Range (-½)
8	*Secured System:* Change Environment 1" radius, -4 on Security Systems rolls, Reduced Endurance (0 END; +½), Persistent (+½) (28 Active Points); OIF Immobile (-1½), Self Only (only affects attempts to find or neutralize the system itself; -½), No Range (-½)

Total cost: 12 points.

Options:

1) High-Quality System: Increase to Detect Change In Capacitance 16-. 10 + 28 = 38 Active Points; total cost 3 + 8 = 11 points.

2) Poor-Quality System: Decrease to Detect Change In Capacitance 12-. 6 + 28 = 34 Active Points; total cost 2 + 8 = 10 points.

3) Disguised System: Change OIF Immobile (-1½) to IIF Immobile (-1¼). Total cost:

Standard: 8 + 28 = 36 Active Points; total cost 3 + 9 = 12 points.

High-Quality: 10 + 28 = 38 Active Points; total cost 4 + 9 = 13 points.

Poor-Quality: 6 + 28 = 34 Active Points; total cost 2 + 9 = 11 points.

4) More Secure Device: This type of capacitance sensor is harder to bypass or defeat. Change to -6 on Security Systems rolls. 40 Active Points (total cost 13 points); total cost of device 16 points.

5) Less Secure Device: This type of capacitance sensor is easier to bypass or defeat. Change to -2 on Security Systems rolls. 16 Active Points (total cost 5 points); total cost of device 8 points.

ELECTRIC EYEBEAM

Effect: Change Environment (must make Security Systems roll to pass through area undetected)
Target/Area Affected: 16" Line or 8" Radius
Duration: Constant
Range: No Range
END Cost: 3/4
Breakability: 7/8 DEF

Description: "Electric eyebeam" is a general term for security devices that broadcast a beam across an enclosed space. If something breaks the beam, the device triggers an alarm. They're generally used indoors (particularly in doorframes or corridors); versions designed for outdoor installation are pulsed so that they're not triggered by small animals, blowing leaves, or the like.

Eyebeams come in several types: photoelectric (standard light, in other words); infrared; ultraviolet; laser; microwave (various combinations and other configurations are also possible). Photoelectric and laser beams aren't normally visible, but can be seen if characters spray mist from an aerosol can (or the like) into the area. Infrared, ultraviolet, and microwave beams do not show up in mist, but are visible to IR viewing devices.

The range of electric eyebeams varies. For the cheaper systems, it might be no more than 7.5" (about 50 feet), though that's more than sufficient for most corridors, doorways, and rooms. Better systems have longer ranges; a good laser beam electric eye might have a range of 500" (1 km, or about 3,280 feet), and a microwave beam around 75" (about 500 feet). The typical beam is fairly narrow, easy to step over or slide under. A photoelectric (visible light) beam can be up to 1" (6.5 feet) wide, a microwave beam a meter wider.

The easiest way to defeat eyebeams is to avoid them: step over them or slide under them. If multiple beams are in use, avoiding them may require one or more rolls using Skills such as Contortionist or Acrobatics (apply the penalty for Security Systems to the Skill Roll — the higher the quality of the system, the tighter the "net" of beams, and thus the harder it is to slip through them without breaking one). In some cases it's possible for a character to set up mirrors (or similar devices) to "reflect" the beam precisely so that the device doesn't realize the beam has been broken (with some photoelectric eyes just shining a flashlight into the receiver can fool it this way). However, better "eyes" have receptors sensitive enough to measure the slightest variation in the beam, making the mirror method unfeasible. Another possibility is to deactivate the beam, but that may involve bypassing anti-tampering security measures inside the housing of the beam generator, and in any event shutting off a beam may register on a central security monitor elsewhere in the facility.

Game Information:

Cost	Power
7	*Photoelectric, Laser, IR, Or UV Electric Eyebeam (Single):* Change Environment 16" Line, -1 to Security Systems rolls (character must succeed with Security Systems roll to get through hex line undetected, reduce penalty to -0 for Photoelectric beam), Invisible Power Effects (device itself is visible, but beam is not, though photoelectric and laser beams can be made visible with mist; +¼), Reduced Endurance (0 END; +½) (35 Active Points); OIF Immobile (-1½), No Range (-½), Only Within Defined Area (16" Line or smaller; -2)
8	*Secured System:* Change Environment 1" radius, -4 on Security Systems rolls, Reduced Endurance (0 END; +½), Persistent (+½) (28 Active Points); OIF Immobile (-1½), Self Only (only affects attempts to find or neutralize the system itself; -½), No Range (-½)

Total cost: 15 points.

Options:

1) Microwave Electric Eyebeam (Single): Increase to -2 to Security Systems rolls. 40 Active Points, total cost 9 points; total cost of device 9 + 8 = 17 points.

2) Disguised System: Change OIF Immobile (-1½) to IIF Immobile (-1¼). Total cost:

Photoelectric, Laser, IR, Or UV: 35 + 28 = 63 Active Points; total cost 8 + 9 = 17 points.

Microwave: 40 + 28 = 68 Active Points; total cost 9 + 9 = 18 points.

3) More Secure Device: This type of electric eyebeam is harder to bypass or defeat. Change to -6 on Security Systems rolls. 40 Active Points (total cost 11 points); total cost of device 18 points.

4) Less Secure Device: This type of electric eyebeam is easier to bypass or defeat. Change to -2 on Security Systems rolls. 16 Active Points (total cost 5 points); total cost of device 13 points.

Cost	Power
9	*Photoelectric Electric Eyebeam Net:* Change Environment 8" radius, -2 to Security Systems rolls (character must succeed with Security Systems roll to get through area undetected), Invisible Power Effects (device itself is visible, but net of beams is not, though photoelectric and laser beams can be made visible with mist; +¼), Reduced Endurance (0 END; +½) (40 Active Points); OIF Immobile (-1½), Only Within Defined Area (16" Line or smaller; -2)
8	*Secured System:* Change Environment 1" radius, -4 on Security Systems rolls, Reduced Endurance (0 END; +½), Persistent (+½) (28 Active Points); OIF Immobile (-1½), Self Only (only affects attempts to find or neutralize the system itself; -½), No Range (-½)

Total cost: 17 points.

Options:

1) Laser, IR, Or UV Electric Eyebeam Net: Increase to -3 to Security Systems rolls. 45 Active Points, total cost 18 points; total cost of device 10 + 8 = 18 points.

2) Microwave Electric Eyebeam Net: Increase to -4 to Security Systems rolls. 51 Active Points, total cost 20 points; total cost of device 11 + 8 = 19 points.

3) Disguised System: Change OIF Immobile (-1½) to IIF Immobile (-1¼). Total cost:

Photoelectric: 40 + 28 = 68 Active Points; total cost 9 + 8 = 17 points.

Laser, IR, Or UV: 45 + 28 = 73 Active Points; total cost 17 + 8 = 25 points.

Microwave: 51 + 28 = 79 Active Points; total cost 19 + 8 = 27 points.

4) More Secure Device: This type of electric eyebeam is harder to bypass or defeat. Change to -6 on Security Systems rolls. 40 Active Points (total cost 13 points); total cost of device 22 points.

5) Less Secure Device: This type of electric eyebeam is easier to bypass or defeat. Change to -2 on Security Systems rolls. 16 Active Points (total cost 5 points); total cost of device 14 points.

FIELD SENSOR

Effect: Detect Change In Field 14-
Target/Area Affected: Self
Duration: Persistent
Range: No Range
END Cost: 0
Breakability: 8 DEF

Description: A field sensor creates an electric or magnetic field around wires or cables that can be strung along fences, over roofs or the ground, or even buried underground. The field covers about a one hex area to either side of the generating wires, or sometimes only along one side. A person entering the field "reflects" some of the energy, causing an effect that trips an alarm.

Defeating a field sensor is difficult, since getting close enough to touch it means tripping it. The best way is to avoid it, or shut it off at the source somehow. In the case of field sensors mounted outdoors, sudden changes in weather or temperature may change the reflectivity of the ground (or the like) and thus cause a false alarm or otherwise confuse the sensor.

Game Information:

Cost	Power
3	*Field Sensor:* Detect Change In Field 14- (Radio Group) (8 Active Points); OIF Immobile (-1½), No Range (-½)
10	*Secured System:* Change Environment 1" radius, -5 on Security Systems rolls, Reduced Endurance (0 END; +½), Persistent (+½) (34 Active Points); OIF Immobile (-1½), Self Only (only affects attempts to find or neutralize the system itself; -½), No Range (-½)

Total cost: 13 points.

Options:

1) High-Quality System: Increase to Detect Change In Field 16-. 10 + 34 = 44 Active Points; total cost 3 + 10 = 13 points.

2) Poor-Quality System: Decrease to Detect Change In Field 12-. 6 + 34 = 40 Active Points; total cost 2 + 10 = 12 points.

3) Disguised System: Change OIF Immobile (-1½) to IIF Immobile (-1¼). Total cost:

Standard: 8 + 34 = 48 Active Points; total cost 3 + 10 = 13 points.

High-Quality: 10 + 34 = 50 Active Points; total cost 4 + 10 = 14 points.

Poor-Quality: 6 + 34 = 46 Active Points; total cost 2 + 10 = 12 points.

4) More Secure Device: This type of field sensor is harder to bypass or defeat. Change to -7 on Security Systems rolls. 46 Active Points (total cost 13 points); total cost of device 16 points.

5) Less Secure Device: This type of field sensor is easier to bypass or defeat. Change to -3 on Security Systems rolls. 22 Active Points (total cost 6 points); total cost of device 9 points.

FINGERPRINT ANALYZER

Effect: Detect Authorized Fingerprint 14-
Target/Area Affected: Self
Duration: Persistent
Range: Self
END Cost: 0
Breakability: 8 DEF

Description: This biometric device is as much a lock as a security device — it's just that the "key" is one or more persons' fingerprints, rather than a physical object, electronic code, or the like. The user places his finger (usually thumb) on the device's pad, and it scans the print. If the print matches one in its database of authorized users, the device opens the door.

Tricking a fingerprint analyzer is difficult, but not impossible. Sometimes it can be done with molds or flat impressions of the print (such as a print the person left on a drinking glass or table) lifted using criminalistic methods (see *Criminology* earlier in this chapter). An even more extreme solution is simply to cut an authorized user's finger off and use that. However, none of these methods work on a *vitaprint analyzer,* which also checks to see if the print attempting to activate it comes from a live finger. If none of these methods are available, a character may have to use his Security Systems knowledge to short out, trick, or otherwise disable the scanner (Electronics is a Complementary Skill).

Some versions of this device scan the whole palm, rather than just a fingerprint.

Game Information:

Cost	Power
3	*Fingerprint Analyzer:* Detect Authorized Fingerprint 14- (Radio Group) (8 Active Points); OIF Immobile (-1½), No Range (-½)
10	*Secured System:* Change Environment 1" radius, -5 on Security Systems rolls, Reduced Endurance (0 END; +½), Persistent (+½) (34 Active Points); OIF Immobile (-1½), Self Only (only affects attempts to find or neutralize the system itself; -½), No Range (-½)

Total cost: 13 points.

Options:

1) High-Quality System: Increase to Detect Authorized Fingerprint 16-. 10 + 34 = 44 Active Points; total cost 3 + 10 = 13 points.

2) Poor-Quality System: Decrease to Detect Authorized Fingerprint 12-. 6 + 34 = 40 Active Points; total cost 2 + 10 = 12 points.

3) Vitaprint Analyzer: Change to Detect Authorized Living Fingerprint; cost remains the same.

3) Disguised System: Change OIF Immobile (-1½) to IIF Immobile (-1¼). Total cost:

Standard: 8 + 34 = 42 Active Points; total cost 3 + 10 = 13 points.

High-Quality: 10 + 34 = 44 Active Points; total cost 4 + 10 = 14 points.

Poor-Quality: 6 + 34 = 40 Active Points; total cost 2 + 10 = 12 points.

4) More Secure Device: This type of fingerprint analyzer is harder to bypass or defeat. Change to -7 on Security Systems rolls. 46 Active Points (total cost 13 points); total cost of device 16 points.

5) Less Secure Device: This type of fingerprint analyzer is easier to bypass or defeat. Change to -3 on Security Systems rolls. 22 Active Points (total cost 6 points); total cost of device 9 points.

INFRARED SENSOR

Effect: Infrared Perception
Target/Area Affected: Self (6" x 6" protected area)
Duration: Persistent
Range: Self (6" x 6" protected area)
END Cost: 0
Breakability: 1 DEF

Description: Also known as a passive IR (PIR) sensor or body heat detector, this security device registers the temperature changes caused when a living being moves into the sensor's field of "vision." Typically that field is a roughly 6" x 6" area, but some cover different areas or 8" long hallways. They're usually disguised to look like air vents or the like, making them difficult to detect (this requires a Security Systems roll at -2 or more, with Concealment acting as a Complementary Skill).

Early passive IR sensors used only one sensing element, which made them prone to false alarms and comparatively easy to defeat. Later ones include more elements, significantly reducing the possibility of false alarms and making the systems less prone to avoidance by intruders.

Defeating PIR systems requires effort. The best way is to short them out or shut them off without alerting anyone, but that's rarely possible. Instead, the character either has to raise the ambient temperature in the area so that his body heat blends into the "background heat," or has to mask his body heat with an insulating suit (defined, in game terms, as a Change Environment that imposes penalties on the device's PER Roll). In some cases it's also possible to "mask" the sensor itself by hanging something in front of it or the like, though the more advanced the system the less likely this is to work.

In some cases, a character can avoid a PIR device's field of coverage. Unlike a motion detector, which floods an entire room with an active broadcast, a PIR sensor is passive — it can only sense what comes near it, it doesn't emit anything. Depending on how it's installed, an infrared sensor may have "blind spots" a character can exploit. For example, PIR systems in locations with pets or small animals often have a "pet alley" at floor level — a foot or two of space they don't cover, to give pets room to walk around without causing false alarms. If a character can ascertain an infrared sensor's "perception pattern," he may be able to get past it by moving only where it cannot "see" him. Since PIR sensors are passive, determining the "perception pattern" is difficult, if not impossible; it requires a Security Systems roll at the standard modifier.

Game Information:

Cost	Power
1	*Infrared Sensor:* Infrared Perception (Radio Group) (5 Active Points); IIF Immobile (-1¼), Affected As Sight Group As Well As Radio Group (-½), Only Within Defined Area (6" x 6" or smaller; -2)
10	*Secured System:* Change Environment 1" radius, -5 on Security Systems rolls, Reduced Endurance (0 END; +½), Persistent (+½) (34 Active Points); OIF Immobile (-1½), Self Only (only affects attempts to find or neutralize the system itself; -½), No Range (-½)

Total cost: 11 points.

Options:

1) More Secure Device: This type of infrared sensor is harder to bypass or defeat. Change to -8 on Security Systems rolls. 52 Active Points (total cost 15 points); total cost of device 16 points.

2) Less Secure Device: This type of infrared sensor is easier to bypass or defeat. Change to -3 on Security Systems rolls. 22 Active Points (total cost 6 points); total cost of device 7 points.

MAGNETIC SWITCH

Effect: Detect Opening Of Door 14-
Target/Area Affected: Self
Duration: Persistent
Range: Self
END Cost: 0
Breakability: 2 DEF

Description: These common security devices, often known as door contacts, are used mainly on doors and windows. They have two parts: a magnet (attached to the door or window) and a magnetically-activated switch (attached to the stationary part — the doorframe or window frame). Opening the door or window pulls the magnet away from the switch, activating it.

Compared to many security devices, magnetic switches are easy to detect (with a compass or stud finder) and to neutralize — with poorer-quality models, all the character needs is a strong magnet that can hold the switch's interior workings in position. With many models, it's possible to neutralize them by shorting the output by placing aluminum foil, conductive spray, or the like on the exposed terminals. However, better models are considerably more difficult to defeat — the contacts are hidden, bringing another magnetic field close to them triggers them, or they use magnetic reed switches and other features that make them hard to bypass. Defeating them usually means penetrating the wall (by drilling or the like) to reach the contacts, then shorting the contacts out.

Placement of a magnetic switch may also make it harder to defeat. If it's placed on the inside of the door or window, it may be impossible for a character to reach and disable unless he's willing to drill holes through the door or take similar steps.

Game Information: *Detect Opening Of Door 14- (Radio Group) (8 Active Points); OIF Immobile (-1½), No Range (-½). Total cost: 3 points.*

Options:

1) High-Quality System: Increase to Detect Opening Of Door 16-. 10 Active Points; total cost 3 points.

2) Poor-Quality System: Decrease to Detect Opening Of Door 12-. 6 Active Points; total cost 2 points.

3) Disguised System: Change OIF Immobile (-1½) to IIF Immobile (-1¼). Total cost:

Standard: 3 points.

High-Quality: 4 points.

Poor-Quality: 2 points.

4) More Secure Device: This type of magnetic switch is harder to bypass or defeat. Add Change Environment 1" radius, -4 on Security Systems rolls, Reduced Endurance (0 END; +½), Persistent (+½) (28 Active Points); OIF Immobile (-1½), Self Only (only affects attempts to find or neutralize the system itself; -½), No Range (-½) (total cost: 8 points). Total cost of device: 11 points.

5) Plunger Switch: A plunger switch is like a magnetic switch except that its workings are more mechanical. The opening of the door or window causes part of the device to depress, triggering the alarm. Alternately, the device may normally be "pressed," and opening the door or window releases it. The latter type is easy to defeat if the character can reach it with a tool — all he has to do is keep holding the switch down as he opens the door or window. Plunger switches of various sorts are sometimes used to guard the casings enclosing other security devices.

MERCURY SWITCH

Effect: Detect Movement Of Protected Object 14-
Target/Area Affected: Self
Duration: Persistent
Range: Self
END Cost: 0
Breakability: 7 DEF

Description: Also known as a "tilt detector," a mercury switch is a type of security device that sounds an alarm when someone moves the object to which it's attached. Defeating it is usually a matter of moving the object so slowly and carefully that it doesn't trigger the alarm. This may require various tools (such as lubricants to make the floor slippery) and a Sleight Of Hand roll at the listed penalty... or the GM may rule that it's simply impossible.

The mercury switch is also available in portable models meant to be hung on doorknobs or the like. Some travelers use these as an added measure of security — if hung on the inside knob of a hotel room door, the device sounds an alarm if someone tries to open the door.

A similar type of security device, an *inertia switch,* uses a tiny metal ball on a tiny metal tripod. Together the two form a circuit. When jostled, the ball moves off one leg of the tripod, breaking the circuit and sounding the alarm.

Game Information:

Cost	Power
3	*Mercury Switch:* Detect Movement Of Protected Object 14- (Radio Group) (8 Active Points); OIF Immobile (-1½), No Range (-½)
10	*Secured System:* Change Environment 1" radius, -5 on Security Systems rolls, Reduced Endurance (0 END; +½), Persistent (+½) (34 Active Points); OIF Immobile (-1½), Self Only (only affects attempts to find or neutralize the system itself; -½), No Range (-½)

Total cost: 13 points.

Options:

1) High-Quality System: Increase to Detect Movement Of Protected Object 16-. 10 + 34 = 44 Active Points; total cost 3 + 10 = 13 points.

2) Poor-Quality System: Decrease to Detect Movement Of Protected Object 12-. 6 + 34 = 40 Active Points; total cost 2 + 10 = 12 points.

3) Disguised System: Change OIF Immobile (-1½) to IIF Immobile (-1¼). Total cost:

Standard: 8 + 34 = 48 Active Points; total cost 3 + 10 = 13 points.

High-Quality: 10 + 34 = 50 Active Points; total cost 4 + 10 = 14 points.

Poor-Quality: 6 + 34 = 46 Active Points; total cost 2 + 10 = 12 points.

4) More Secure Device: This type of mercury switch is harder to bypass or defeat. Change to -7 on Security Systems rolls. 46 Active Points (total cost 13 points); total cost of device 16 points.

5) Less Secure Device: This type of mercury switch is easier to bypass or defeat. Change to -3 on Security Systems rolls. 22 Active Points (total cost 6 points); total cost of device 9 points.

METAL DETECTOR

Effect: Detect Metal Passing Through Device's Arch 14-
Target/Area Affected: Self
Duration: Persistent
Range: No Range
END Cost: 0
Breakability: 2 DEF

Description: Familiar to anyone who's visited an airport or a courthouse in recent years, a metal detector consists of an archway-like area containing sensors. The device perceives any metal object passing through it and registers an alarm, though depending on its sensitivity it may not sense smaller metal objects like belt buckles and wristwatches. Bypassing one is impossible unless a character can either (a) sneak a metal object past without it passing under the archway, or (b) access the device beforehand and somehow trick it into not detecting metal objects on his person. Alternately, a character may be able to sneak a normally metallic object through by having it made out of something other than metal, such as knives with ceramic or fiberglass blades instead of steel ones.

Game Information: *Detect Metal Passing Through Device's Arch 14- (Radio Group) (8 Active Points); OIF Immobile (-1½), No Range (-½). Total cost: 3 points.*

Options:

1) High-Quality System: Increase to Detect Metal Passing Through Device's Arch 16-. 10 Active Points; total cost 3 points.

2) Poor-Quality System: Decrease to Detect Metal Passing Through Device's Arch 12-. 6 Active Points; total cost 2 points.

3) Disguised System: Change OIF Immobile (-1½) to IIF Immobile (-1¼). Total cost:

Standard: 3 points

High-Quality: 4 points

Poor-Quality: 2 points

MICROPHONE

Effect: Clairsentience (Hearing Group), Fixed Perception Point
Target/Area Affected: Self
Duration: Constant
Range: 150"
END Cost: 0
Breakability: 6 DEF

Description: Microphones can be adapted for security purposes. The most obvious use is to place a security mike in an area intruders have to pass through, then have a guard or the like listen for any suspicious noises. Alternately, the microphone can be set up to trigger an alarm if it picks up any sounds of a certain decibel level or higher. Defeating a microphone usually just requires Stealth — if the character can make a Stealth roll at the penalty listed in the Security Systems Modifiers table, he doesn't make enough noise to alert anyone. The GM should require Stealth rolls as often as seems appropriate. Sometimes one will get the job done, other times a character has to make multiple rolls to avoid a single mike.

Some types of security mikes are specialized to perceive certain types or frequencies of sound. The Window Sensors describe below are essentially a type of microphone; so are electric cable sensors, which are strung along a fence and respond to the sounds made by someone climbing or cutting that fence.

THE ALARM PROCESS

Here's what usually happens in the 10-30 seconds after an alarm is triggered. The signal goes out to the receiver, which sends it to a monitoring station that processes it. (In many situations the monitoring station is offsite, run by a private security firm or the like, but many of the installations PCs have to sneak into have their own security offices and personnel.) The dispatcher monitoring the alarm then contacts the authorities if necessary. How long it takes the authorities to respond varies considerably from jurisdiction to jurisdiction and due to other factors. On average, police or firefighters can reach the scene of an alarm within seven minutes, though high-priority facilities get quicker service. Commercial security services often respond quicker because they have fewer responsibilities and less territory to cover. If a facility generates too many false alarms, the authorities may stop responding, respond more slowly, or even impose fines.

Typically 99% of alarms received by monitoring centers are false alarms usually caused by user error (not setting the alarm correctly, not disarming it properly, and so on). If an alarm is disarmed within 10 seconds of the detector triggering it, it won't send a signal to the monitoring station, and even after it sends the signal the authorities usually don't respond if its disarmed within one minute. ("Disarming" in these situations means entering a valid code into the system via a control panel, not shutting the device off.) Alarm signals are protected with 1024-bit encryption; only the receiver contains the decryption key.

Game Information:

Cost	Power
9	*Security Microphone:* Clairsentience (Hearing Group), Reduced Endurance (0 END; +½) (30 Active Points); OIF Immobile (-1½), Fixed Perception Point (-1)
8	*Secured System:* Change Environment 1" radius, -4 on Security Systems rolls, Reduced Endurance (0 END; +½), Persistent (+½) (28 Active Points); OIF Immobile (-1½), Self Only (only affects attempts to find or neutralize the system itself; -½), No Range (-½)

Total cost: 17 points.

Options:

1) Multiple Security Microphones: This system has up to eight security mikes in place. Add Multiple Perception Points (up to 8 points). 52 Active Points, total cost 15 points; total cost of device 23 points.

2) Disguised System: Change OIF Immobile (-1½) to IIF Immobile (-1¼). Total cost 9 + 9 = 18 points.

3) More Secure Device: This type of security microphone is harder to bypass or defeat. Change to -5 on Security Systems rolls. 34 Active Points (total cost 10 points); total cost of device 19 points.

4) Less Secure Device: This type of security microphone is easier to bypass or defeat. Change to -2 on Security Systems rolls. 16 Active Points (total cost 5 points); total cost of device 14 points.

MOTION DETECTOR

Effect: Detect Moving Persons/Objects 15-
Target/Area Affected: Self (15" protected area)
Duration: Persistent
Range: Self (15" protected area)
END Cost: 0
Breakability: 7 DEF

Description: Motion detectors use ultrasonic sound (or sometimes microwaves or other forms of energy) to detect whether anything is moving in their field of "vision" (which extends for about 50 feet [about 8"] in front of them). When someone moves into the protected area, he disturbs the "field," and the device registers this and activates the alarm. They're best used in high-security areas with hard surfaces where no movement is expected (*i.e.,* where guards don't patrol, there are no pets or cuckoo clocks, and so on). Rooms with soft or absorbent surfaces (such as thick carpet or heavy drapes) absorb more sound, so ultrasonic motion detectors don't work well in them (reduce the device's PER Roll by -2 or more).

Ultrasonic versions of this alarm can only cover a single enclosed area (since the sound waves bounce off walls and other solid surfaces). However, a single microwave-based motion sensor may cover multiple rooms. Microwaves reflect off metal, but not off glass, wallboard, wood, and the like, so they can perceive through solid objects. That means they can be hidden behind a piece of furniture, a cover, or the like. On the other hand, a microwave-based motion detector might be triggered by innocuous movement outside the building it's installed in (such as a passing bird or car); fluorescent lights and radio transmissions can sometimes cause false alarms as well.

Some poor-quality motion detectors won't register objects moving slowly. In game terms, this usually means moving at no greater speed than 1" per Turn. This requires a Stealth roll (in addition, the GM may require characters to make EGO Rolls (or Contortionist rolls, see page 140) to force themselves to move that slowly). If the character succeeds with his Stealth roll exactly, the sensor suffers a -1 penalty to its PER Roll; each point by which the Stealth roll is made beyond that increases the penalty by another -1. Better models can't be fooled by slow movement, and can even detect the presence of immobile objects that aren't normally in the area they cover.

Defeating motion sensors is difficult, at best. The easiest thing to do is avoid them, but if that's not possible, sometimes characters can overload or jam them with devices designed to broadcast the same frequency of sound (in game terms, that sort of device is a Change Environment that reduces the motion detector's PER Roll). Another possibility would be to wear garments made of sound-absorbent material (even thick cloth or fur might do); this, too, would be defined as a Change Environment that diminished the device's PER Roll. If characters can get to the device's receiver without triggering it, covering up the receive (say, with tape) may render it "blind" (or at least significantly reduce its PER Roll), though newer models have "anti-masking" features that trigger an alarm if anyone places an object too close to them.

Game Information:

Cost	Power
4	*Motion Detector:* Detect Moving Persons/Objects 15- (Radio Group) (11 Active Points); OIF Immobile (-1½), Limited Range (8"; -¼)
13	*Secured System:* Change Environment 1" radius, -6 on Security Systems rolls, Reduced Endurance (0 END; +½), Persistent (+½) (40 Active Points); OIF Immobile (-1½), Self Only (only affects attempts to find or neutralize the system itself; -½)

Total cost: 17 points.

Options:

1) High-Quality System: Increase to Detect Moving Persons/Objects 17-. 13 Active Points (total cost 5 points); total cost of device 18 points.

2) Poor-Quality System: Decrease to Detect Moving Persons/Objects 13-. 9 Active Points (total cost 3 points); total cost of device 16 points.

3) Disguised System: Change OIF Immobile (-1½) to IIF Immobile (-1¼). Total cost:

Standard: 17 points.

High-Quality: 18 points.

Poor-Quality: 17 points.

4) Bistatic Microwave Motion Detector: This form of motion detector uses a separate transmitter and receiver for greater range of coverage. Change to

Limited Range (20"; -¼). All costs are unchanged.

5) More Secure Device: This type of motion detector is harder to bypass or defeat. Change to -8 on Security Systems rolls. 52 Active Points (total cost 17 points); total cost of device 21 points.

6) Less Secure Device: This type of motion detector is easier to bypass or defeat. Change to -3 on Security Systems rolls. 22 Active Points (total cost 7 points); total cost of device 11 points.

OPTICAL DETECTOR

Effect: Detect Sudden Change In Lighting Conditions 14-
Target/Area Affected: Self (6" x 6" protected area)
Duration: Persistent
Range: Self (6" x 6" protected area)
END Cost: 0
Breakability: 7 DEF

Description: An optical detector triggers an alarm if it notes a change in the level of light in a room — for example, if a shadow falls across a normally lit area, or if someone turns on a flashlight or lights a match. (The system does not react to gradual changes in lighting, such as the setting or rising of the sun.) They're particularly useful for rooms normally kept completely dark, or rooms where a spotlight shines on a particular area (such as an *objet d'art* lovingly displayed). The only way to defeat them is to not use visible light (for example, to rely on infrared light and goggles, or nightvision devices). If appropriate, the GM may require a Stealth roll at the listed penalty to see if a character moving through an optical detector's field of coverage (approximately 6" x 6") can avoid casting a shadow that triggers the device.

Game Information:

Cost	Power
2	*Optical Detector:* Detect Sudden Change In Lighting Conditions 14- (Radio Group) (8 Active Points); OIF Immobile (-1½), Only Within Defined Area (6" x 6" or smaller; -2)
10	*Secured System:* Change Environment 1" radius, -5 on Security Systems rolls, Reduced Endurance (0 END; +½), Persistent (+½) (34 Active Points); OIF Immobile (-1½), Self Only (only affects attempts to find or neutralize the system itself; -½), No Range (-½)

Total cost: 12 points.

Options:

1) High-Quality System: Increase to Detect Sudden Change In Lighting Conditions 16-. 10 Active Points, total cost 2 points; total cost of device 12 points.

2) Poor-Quality System: Decrease to Detect Sudden Change In Lighting Conditions 12-. 6 Active Points, total cost 1 point; total cost of device 11 points.

3) Disguised System: Change OIF Immobile (-1½) to IIF Immobile (-1¼). Total cost:

Standard: 2 + 10 = 12 points.

High-Quality: 2 + 10 = 12 points.

Poor-Quality: 1 + 10 = 11 points.

4) More Secure Device: This type of optical detector is harder to bypass or defeat. Change to -7 on Security Systems rolls. 46 Active Points (total cost 13 points); total cost of device 15 points.

5) Less Secure Device: This type of optical detector is easier to bypass or defeat. Change to -3 on Security Systems rolls. 22 Active Points (total cost 6 points); total cost of device 8 points.

PRESSURE PLATES/MATS/SWITCHES

Effect: Detect Sufficient Weight/Pressure 16-
Target/Area Affected: Self
Duration: Persistent
Range: Self
END Cost: 0
Breakability: 4 DEF

Description: Placed under carpets, entry mats, and the like, pressure plates (also known as switch mats) trigger an alarm if any weight is placed on them. (If necessary, they can be programmed to ignore small weights, like the weight of a guard dog.) Advanced ones are too sensitive to fool, but poorer-quality ones can be defeated by characters who distribute their weight — for example, by placing a sheet of plywood or thick plastic over the plate before stepping on it. Other ways to defeat a pressure plate are to short it out, to cut the power to it (or its feed to the alarm system), or to avoid stepping on it (by climbing along the walls or ceiling, for example).

Pressure plates can also be used in the opposite way: they're placed underneath an object (such as an antique in a display case), and if the objects is removed (*i.e.,* the pressure is lifted), they trigger an alarm. In this case they're often known as *pressure switches.* Characters can defeat a pressure switch in a variety of ways, including in some cases a simultaneous replacement of the removed object with one of equal weight (this requires a Sleight Of Hand roll at the listed penalty). More sensitive models — pressure transducers — register any change of pressure (increased or decreased) and are much harder to defeat (increase the penalty for defeating them by -2).

Game Information:

Cost	Power
4	*Pressure Plate:* Detect Sufficient Weight/Pressure 16- (Touch Group) (10 Active Points); OIF Immobile (-1½)
7	*Secured System:* Change Environment 1" radius, -3 on Security Systems rolls, Reduced Endurance (0 END; +½), Persistent (+½) (22 Active Points); OIF Immobile (-1½), Self Only (only affects attempts to find or neutralize the system itself; -½)

Total cost: 11 points.

Options:

1) High-Quality System: Increase to Detect Sufficient Weight/Pressure 18-. 12 Active Points (total cost 5 points); total cost of device 12 points.

2) Poor-Quality System: Decrease to Detect Sufficient Weight/Pressure 14-. 8 Active Points (total cost 3 points); total cost of device 10 points.

3) Disguised System: Change OIF Immobile (-1½) to IIF Immobile (-1¼). Total cost:

Standard: 12 points.

High-Quality: 13 points.

Poor-Quality: 11 points.

4) More Secure Device: This type of pressure plate is harder to bypass or defeat. Change to -4 on Security Systems rolls. 28 Active Points (total cost 9 points); total cost of device 13 points.

5) Less Secure Device: This type of pressure plate is easier to bypass or defeat. Change to -1 on Security Systems rolls. 16 Active Points (total cost 5 points); total cost of device 9 points.

PROXIMITY SENSORS

Effect: Detect Human 14-
Target/Area Affected: Self (2" around sensor)
Duration: Constant
Range: Self
END Cost: 0
Breakability: 2 DEF

Description: Proximity sensors are short-range detection devices that register the electrical field of the human body. The sensing wire (see below) acts as a capacitor, creating an electrical flux between it and the ground; when someone approaches the device, he passes through the electrical flux, increasing the capacitance of the system and triggering the alarm. They're used primarily indoors or in other controlled environments, though some versions (beat proximity detectors) are designed for outdoor use.

A proximity sensor can perceive someone up to a few feet away: 1" in game terms for most systems, though high-quality systems can sense someone up to 2" away. A few versions are set up as touch alarms — they can only be activated if someone touches the object the device guards (for this to work, the object must be metal, insulated from the floor, and at least six inches away from the walls). Regardless of type, even the poorest-quality proximity sensors are quite sensitive. Defeating them directly is impossible (since they'll register the electrical field of the character who gets close enough to try); characters have to shut them off or bypass them from a remote location to avoid them (if the GM rules this is possible, the Security Systems penalty is -3 for Poor, -6 for Average, and -9 for High).

The main component of a proximity sensor is nothing more than a simple piece of wire. If the object being protected by the device is metallic (such as a filing cabinet or a safe), the object itself may take the place of the piece of wire, making the device even more difficult to defeat or avoid (apply another -1 penalty to the Security Systems roll). On the bright side for larcenous characters, installing a promixity sensor (of any type) properly is difficult (-3 to the Security Systems roll), so the system may not function as effectively as its owner thinks it does. Furthermore, proximity sensors are so sensitive that they're prone to false alarms.

Game Information: *Detect Human 14- (Radio Group) (10 Active Points); OIF Immobile (-1½), Limited Range (2", see text; -¼)*

Options:

1) High-Quality System: Increase to Detect Human 16-. 12 Active Points; total cost 4 points.

2) Poor-Quality System: Decrease to Detect Human 12-. 8 Active Points; total cost 3 points.

3) Disguised System: Change OIF Immobile (-1½) to IIF Immobile (-1¼). Total cost:

Standard: 4 points.

High-Quality: 5 points.

Poor-Quality: 3 points.

RADAR

Effect: Radar
Target/Area Affected: Self (91" range)
Duration: Persistent
Range: Self (91" range)
END Cost: 0
Breakability: 3 DEF

Description: Installations expecting to be attacked from the air often use radar to monitor the surrounding airspace and thus obtain warning of approaching flying objects (they may also use the radar to help target an attack against the object). Defeating radar remotely is impossible, but it can be avoided through special technology ("stealth" aircraft and such) or flying low enough to the ground to avoid it. In short, the character's best bet is to diminish his radar profile as much as he can and hope the device doesn't "see" him.

Ground-effect radar is used for outdoor security at ground level. It can detect a human-sized target over a range of around 91" (about 600 feet). Again, defeating it directly is impossible; the only hope is to avoid it, or to shut it down or bypass it remotely somehow.

Systems Operation serves as a Complementary Skill to Security Systems for tasks involving radar systems.

Game Information *(Ground-Effect Radar): Radar (Radio Group) (15 Active Points); OIF Immobile (-1½), Limited Range (91"; -¼) (total cost: 5 points) plus Telescopic (+8 versus Range Modifier for Radar) (4 Active Points); OIF Immobile (-1½) (total cost: 2 points). Total cost: 7 points.*

Options:

1) Disguised System: Change OIF Immobile (-1½) to IIF Immobile (-1¼). Total cost: 8 points.

2) Sonar: Sonar systems are more or less like the radar systems outlined above, but used to scan for intruders approaching underwater and the like.

RESONANT CAVITY

Effect: Detect Cessation Of Oscillation 18-
Target/Area Affected: Self
Duration: Persistent
Range: Self
END Cost: 0
Breakability: 2 DEF

Description: It's possible to seal a protected item inside a resonant cavity that has sound waves of a given frequency oscillating inside it. Opening the cavity causes the oscillation to cease, triggering the alarm. Defeating these is virtually impossible, but they only work for very specific security needs, so characters aren't likely to encounter them frequently.

Game Information: *Detect Cessation Of Oscillation 18- (Touch Group) (12 Active Points); OIF Immobile (-1½). Total cost: 5 points.*

RETINA SCANNER

Effect: Detect Authorized Retina 14-
Target/Area Affected: Self
Duration: Persistent
Range: Self
END Cost: 0
Breakability: 8 DEF

Description: This biometric device is as much a lock as it is a true security device — it's just that the "key" is one or more persons' retinas, rather than a physical object, electronic code, or the like. The user places his eye to the device's scanner, which harmlessly scans the retina. If the retina matches one in its database of authorized users, the device opens the door.

Tricking a retina scanner is much like tricking a fingerprint analyzer (see above), except that producing fake versions or flat impressions of a retina print is very difficult, if not impossible. Similarly, some advanced retina scanners can determine whether the eye they're scanning is alive.

Game Information:

Cost	Power
3	*Retina Scanner:* Detect Authorized Retina 14- (Radio Group) (8 Active Points); OIF Immobile (-1½), No Range (-½)
11	*Secured System:* Change Environment 1" radius, -6 on Security Systems rolls, Reduced Endurance (0 END; +½), Persistent (+½) (40 Active Points); OIF Immobile (-1½), Self Only (only affects attempts to find or neutralize the system itself; -½), No Range (-½)

Total cost: 14 points.

Options:

1) High-Quality System: Increase to Detect Authorized Retina 16-. 10 + 40 = 50 Active Points; total cost 3 + 11 = 14 points.

2) Poor-Quality System: Decrease to Detect Authorized Retina 12-. 6 + 40 = 46 Active Points; total cost 2 + 11 = 13 points.

3) Vitaprint Scanner: Change to Detect Authorized Living Retina; cost remains the same.

4) Disguised System: Change OIF Immobile (-1½) to IIF Immobile (-1¼). Total cost:

Standard: 8 + 40 = 48 Active Points; total cost 3 + 12 = 15 points.

High-Quality: 10 + 40 = 50 Active Points; total cost 4 + 12 = 16 points.

Poor-Quality: 6 + 40 = 46 Active Points; total cost 2 + 12 = 14 points.

5) More Secure Device: This type of retina scanner is harder to bypass or defeat. Change to -4 on Security Systems rolls. 46 Active Points (total cost 13 points); total cost of device 16 points.

6) Less Secure Device: This type of retina scanner is easier to bypass or defeat. Change to -8 on Security Systems rolls. 22 Active Points (total cost 6 points); total cost of device 9 points.

SEISMIC DETECTOR

Effect: Detect Vibrations Of Footsteps/Ground Vehicles 14-
Target/Area Affected: Self
Duration: Persistent
Range: Self (see text)
END Cost: 0
Breakability: 3 DEF

Description: These devices are small sensors buried in the ground. They detect the low-frequency vibrations caused by footsteps or vehicles. (They can also detect the vibrations of tunneling through the ground.) In the hex in which they're implanted, they get their standard PER Roll, but the Range Modifier for hexes beyond that is doubled.

Defeating a seismic detector is difficult, since digging down to one triggers it. A character who makes a Stealth roll at the penalty listed in the Security Systems Modifiers table can avoid setting them off; he must make one roll per hex in the coverage area moved through. Characters who can move along the ground in ways that don't involve footsteps — such as rolling — may receive a +1 or +2 bonus to their Stealth rolls. A character with Ground Gliding automatically avoids setting them off. If a character knows exactly where the field of coverage is, he can put a portable bridge or the like over the line and thus avoid creating vibrations that trigger the device.

Game Information:

Cost	Power
5	*Seismic Detector:* Detect Vibrations Of Footsteps/Ground Vehicles 14- (Touch Group), Ranged (15 Active Points); OIF Immobile (-1½), Side Effects (suffers double Range Modifier, always occurs; -½)
10	*Secured System:* Change Environment 1" radius, -5 on Security Systems rolls, Reduced Endurance (0 END; +½), Persistent (+½) (34 Active Points); OIF Immobile (-1½), Self Only (only affects attempts to find or neutralize the system itself; -½), No Range (-½)

Total cost: 15 points.

Options:

1) High-Quality System: Increase to Detect Vibrations Of Footsteps/Ground Vehicles 16-. 17 Active Points, total cost 6 points; total cost of overall device 16 points.

2) Poor-Quality System: Decrease to Detect Vibrations Of Footsteps/Ground Vehicles 12-. 13 Active Points, total cost 4 points; total cost of overall device 14 points.

3) Magnetic Detector: A variation on the seismic detector is the *magnetic detector,* a small sensor buried in the ground. It detects the magnetic field of large metal objects (*i.e.,* vehicles) passing over it. Change to Detect Vehicular Magnetic Fields 14- (Radio Group) (10 Active Points); OIF Immobile (-1½). Total cost 4 points; total cost of overall device 14 points.

4) More Secure Device: This type of seismic detector is harder to bypass or defeat. Change to -7 on Security Systems rolls. 46 Active Points (total cost 13 points); total cost of device 18 points.

5) Less Secure Device: This type of seismic detector is easier to bypass or defeat. Change to -3 on Security Systems rolls. 22 Active Points (total cost 6 points); total cost of device 11 points.

TAUT-WIRE SWITCH

Effect: Detect Movement Of Wires 14-
Target/Area Affected: Self
Duration: Persistent
Range: Self
END Cost: 0
Breakability: 2 DEF

Description: This device is used on barbed wire fences and the like. It consists of sensors attached to multiple wires and protected by an anti-tampering enclosure. When someone tries to spread apart the strands of wire to get through the fence, the sensor registers the movement and triggers the alarm. Defeating them may involve shorting out the sensor, cutting instead of spreading the wires, going over or under the fence instead of through it, or the like.

Game Information:

Cost	Power
3	*Taut-Wire Switch:* Detect Movement Of Wires 14- (Radio Group) (8 Active Points); OIF Immobile (-1½), No Range (-½)
3	*Secured System:* Change Environment 1" radius, -1 on Security Systems rolls, Reduced Endurance (0 END; +½), Persistent (+½) (10 Active Points); OIF Immobile (-1½), Self Only (only affects attempts to find or neutralize the system itself; -½), No Range (-½)

Total cost: 6 points.

Options:

1) High-Quality System: Increase to Detect Movement Of Wires 16-. 10 Active Points, total cost 3 points; total cost of device 6 points.

2) Poor-Quality System: Decrease to Detect Movement Of Wires 12-. 6 Active Points, total cost 2 points; total cost of device 5 points.

3) Disguised System: Change OIF Immobile (-1½) to IIF Immobile (-1¼). Total cost:

Standard: 8 + 10 = 18 Active Points; total cost 3 + 3 = 6 points.

High-Quality: 10 + 10 = 20 Active Points; total cost 4 + 3 = 7 points.

Poor-Quality: 6 + 10 = 16 Active Points; total cost 2 + 3 = 5 points.

4) More Secure Device: This type of taut-wire switch is harder to bypass or defeat. Change to -2 on Security Systems rolls. 16 Active Points (total cost 5 points); total cost of device 8 points.

VIBRATION SENSOR

Effect: Detect Vibrations In Attached Object 14-
Target/Area Affected: Self
Duration: Persistent
Range: Self
END Cost: 0
Breakability: 2 DEF

Description: Similar in some ways to a motion detector, this device registers vibrations in the object it's attached to — a fence, window, display case, or the like. The better the quality, the more sensitive the sensor.

A large barrier, such as a fence, usually has vibration sensors mounted 3-10 meters apart; most look like small grey boxes about the size of a pack of cigarettes. Some versions of this type of sensor include the piezoelectric transducer, geophone transducer, electromechanical transducer, and electric cable transducer. Some types are designed to explode after triggering the alarm, thus hopefully injuring the intruder.

For vibration sensors used on a fence, the best ways to avoid them are to tunnel underneath the fence (if possible) or bridge over it. Sensors on smaller barriers such as windows or display cases are much harder to defeat; they typically have to be shorted out or tricked.

Game Information:

Cost	Power
3	*Vibration Sensor:* Detect Vibrations In Attached Object 14- (Radio Group) (8 Active Points); OIF Immobile (-1½), No Range (-½)
8	*Secured System:* Change Environment 1" radius, -4 on Security Systems rolls, Reduced Endurance (0 END; +½), Persistent (+½) (28 Active Points); OIF Immobile (-1½), Self Only (only affects attempts to find or neutralize the system itself; -½), No Range (-½)

Total cost: 11 points.

Options:

1) High-Quality System: Increase to Detect Vibrations In Attached Object 16-. 10 Active Points, total cost 3 points; total cost of device 11 points.

2) Poor-Quality System: Decrease to Detect Vibrations In Attached Object 12-. 6 Active Points, total cost 2 points; total cost of device 10 points.

3) Disguised System: Change OIF Immobile (-1½) to IIF Immobile (-1¼). Total cost:

Standard: 8 + 28 = 36 Active Points; total cost 3 + 9 = 12 points.

High-Quality: 10 + 28 = 38 Active Points; total cost 4 + 9 = 13 points.

Poor-Quality: 6 + 28 = 34 Active Points; total cost 2 + 9 = 11 points.

4) More Secure Device: This type of vibration sensor is harder to bypass or defeat. Change to -6 on Security Systems rolls. 40 Active Points (total cost 11 points); total cost of device 14 points.

5) Less Secure Device: This type of vibration sensor is easier to bypass or defeat. Change to -2 on Security Systems rolls. 16 Active Points (total cost 5 points); total cost of device 8 points.

6) Exploding Vibration Sensor: When triggered, this form of vibration sensor explodes, injuring or killing anyone nearby. Also buy: RKA 3d6, Explosion (+½), Trigger (when Detect perceives a vibration; +¼) (79 Active Points); OIF Immobile (-1½), No Range (-½), Side Effect (totally destroys sensor, always occurs; -½), 1 Charge which Never Recovers (-4) (total cost: 10 points). Total cost of device: 21 points.

VOICEPRINT ANALYZER

Effect: Detect Authorized Voice 14-
Target/Area Affected: Self
Duration: Persistent
Range: Self
END Cost: 0
Breakability: 2 DEF

Description: This biometric device is as much a lock as it is a security device — it's just that the "key" is one or more persons' voices, rather than a physical object, electronic code, or the like. The user speaks into the device's receiver. If the voiceprint matches one in its database of authorized users, the device opens the door. Unlike a fingerprint or retina scanner, a voiceprint analyzer may not work for an authorized user in some instances — such as if illness or exposure to helium alters his voice — but they usually work even if the user's voice isn't in optimal condition. However, some advanced models of this device can detect the stress level in a user's voice, and won't open if he's under too much stress (such as when he's being coerced by someone who wants to force him to open the door).

Tricking a voiceprint analyzer is difficult. Some models can be tricked with high-quality recordings of an authorized user's voice; others aren't very susceptible to this. Using Mimicry to fool a voiceprint device is even more difficult; at best, it requires a Mimicry roll at -8.

Game Information:

Cost	Power
3	*Voiceprint Analyzer:* Detect Authorized Voice 14- (Hearing Group) (8 Active Points); OIF Immobile (-1½), No Range (-½)
8	*Secured System:* Change Environment 1" radius, -4 on Security Systems rolls, Reduced Endurance (0 END; +½), Persistent (+½) (28 Active Points); OIF Immobile (-1½), Self Only (only affects attempts to find or neutralize the system itself; -½), No Range (-½)

Total cost: 11 points.

Options:

1) High-Quality System: Increase to Detect Authorized Voice 16-.10 + 28 = 38 Active Points; total cost 3 + 8 = 11 points.

2) Poor-Quality System: Decrease to Detect Authorized Voice 12-. 6 + 28 = 34 Active Points; total cost 2 + 8 = 10 points.

3) Disguised System: Change OIF Immobile (-1½) to IIF Immobile (-1¼). Total cost:

Standard: 8 + 28 = 36 Active Points; total cost 3 + 9 = 12 points.

High-Quality: 10 + 28 = 38 Active Points; total cost 4 + 9 = 13 points.

Poor-Quality: 6 + 28 = 34 Active Points; total cost 2 + 9 = 11 points.

4) More Secure Device: This type of voiceprint analyzer is harder to bypass or defeat. Change to -6 on Security Systems rolls. 40 Active Points (total cost 11 points); total cost of device 14 points.

5) Less Secure Device: This type of voiceprint analyzer is easier to bypass or defeat. Change to -2 on Security Systems rolls. 16 Active Points (total cost 5 points); total cost of device 8 points.

WINDOW FOIL

Effect: Detect Breaking Of Window 14-
Target/Area Affected: Self
Duration: Persistent
Range: Self
END Cost: 0
Breakability: 2 DEF

Description: This device is a silvery strip of foil placed on a window; the foil is part of an alarm circuit. Breaking the window breaks the circuit, triggering the alarm. They're relatively easily avoided with glass cutters or any other method that doesn't involve breaking the window glass where the foil is. Then the character either opens the window normally by reaching his hand through, or gains access to the device's terminals and shorts them out.

Similar devices can be installed onto or into doors to prevent intruders from cutting through the door and thus bypassing magnetic switch alarms and the like.

Game Information: *Detect Breaking Of Window 14- (Radio Group) (8 Active Points); OIF Immobile (-1½), No Range (-½), Side Effect (+1 to Security System rolls to defeat, always occurs; -½). Total cost: 2 points.*

Options:

1) High-Quality System: Increase to Detect Breaking Of Window 16-. 10 Active Points; total cost 3 points.

2) Poor-Quality System: Decrease to Detect Breaking Of Window 12-. 6 Active Points; total cost 2 points.

3) Disguised System: Change OIF Immobile (-1½) to IIF Immobile (-1¼). Total cost:

Standard: 2 points.

High-Quality: 3 points.

Poor-Quality: 2 points.

4) Window Sensor: Similar to window foil, a window sensor is a small security device (about the size of a quarter) that mounts on the corner of a pane of glass. It's attuned to the sound (or vibration) of breaking glass, and activates an alarm if the glass it's on is broken. (Dropping a handful of coins, or breaking some other glass, can also trigger them.) Neutralizing one usually involves drilling a small hole in the glass so the character can reach the leads and short it out. Remove Side Effect and also buy a Secured System: Change Environment 1" radius, -3 on Security Systems rolls, Reduced Endurance (0 END; +½), Persistent (+½) (22 Active Points); OIF Immobile (-1½), Self Only (only affects attempts to find or neutralize the system itself; -½), No Range (-½) (total cost 6 points). Total cost of device 9 points.

5) Window Wires: Similar to window foil but *much* harder to avoid, window wires are wires embedded in the glass of the window. The wires are part of an alarm circuit, so breaking the window breaks the circuit and triggers the alarm. They're virtually impossible to defeat. Remove Side Effect and also buy a Secured System: Change Environment 1" radius, -7 on Security Systems rolls, Reduced Endurance (0 END; +½), Persistent (+½) (46 Active Points); OIF Immobile (-1½), Self Only (only affects attempts to find or neutralize the system itself; -½), No Range (-½) (total cost: 13 points). Total cost of device: 16 points.

6) Wired Window Tube: This device looks like the iron bars placed outside a window to prevent someone from getting in, but they're sometimes mounted inside the window. A person who wants to come in through the window has to cut or bend the iron bars (actually tubes), and that means breaking the wires inside the tubes and setting off an alarm. Neutralizing them is difficult, and usually involves shorting out the system somehow. It's bought the same as window wires.

X-RAY SCANNER

Effect: N-Ray Perception
Target/Area Affected: Self
Duration: Persistent
Range: Self
END Cost: 0
Breakability: 2 DEF

Description: X-ray scanning devices are used for a wide variety of security applications, such as viewing a piece of luggage to make sure it doesn't contain a bomb or a truck to make sure it doesn't contain contraband. Fooling one is basically impossible; the main tactic is to avoid having the container in question scanned in the first place. Alternately, a character might try to disguise an object so it looks normal to the person viewing the screen, or manipulate the system in advance somehow so it doesn't show what he's trying to hide.

Game Information: *N-Ray Perception (Sight Group; stopped by lead, gold, or force fields) (10 Active Points); OIF Immobile (-1½), No Range (-½). Total cost: 3 points.*

Options:

1) Disguised System: Change OIF Immobile (-1½) to IIF Immobile (-1¼). Total cost: 4 points.

Other Rules

COMPUTER SECURITY

Some characters, such as hackers, only want to buy Security Systems to represent their knowledge of, and ability to bypass or defeat, the security software in computers. In short, they want Security Systems only to use it as a Complemetary Skill with Computer Programming. They can buy Security Systems with the Limitation *Only Versus Computer Security Systems* (-½).

EQUIPMENT

Equipment and tools are mandatory for most uses of Security Systems; disabling a device "by hand" is not possible. However, if the circumstances are such that the character can make a roll just to avoid/bypass a security device, then he may not need any equipment — it all depends on the environment, the type of device, and other factors.

POWERS AND SECURITY SYSTEMS

Many Powers could help a character perceive or bypass a security device. Some forms of Change Environment affect Perception, which may in turn interfere with sensors' ability to detect things (or human operators' ability to monitor them). Desolidification allows a character to walk through barriers and avoid triggering motion detectors, proximity sensors, and many other security devices. The "Ground Gliding" form of Gliding lets a character avoid vibration sensors and the like because he doesn't create vibrations in the ground. Telekinesis, and in some cases Stretching, let a character work on a security device from a distance so he doesn't have to get close enough to trigger it.



In some cases, characters may take Security Systems to reflect an ability to avoid or bypass security devices using metamorphic powers. A Shrunk character can easily slip around many alarms and traps, while an elastic-bodied one can squeeze through bars and fences or fit through air ducts. Security Systems isn't necessary to use those Powers in these ways, but it lets the character know where the security devices are and the best way around them using his abilities.

CONSEQUENCES OF FAILURE

When a character's trying to find a security device, in most cases a failed Security Systems roll means he didn't locate the device (if there's one there at all — the GM may want to roll for the character so the player can't be certain whether he missed a device, or there wasn't one to find). He remains in doubt as to whether one exists. A bad failure (by 4 or more) gives incorrect information — the character believes a device is present when there isn't one, that an existing device is much worse than it actually is, or that there's no device present when there really is one.

When a character tries to bypass, disable, disarm, or deactivate a security device, a failed roll usually means the device remains "active" — functional and able to alert others to the character's presence (or cause him harm) if he proceeds. A badly failed roll (by 4 or more) means the character either accidentally triggers the device, or thinks he's disabled it when he really hasn't.

BASE TIMES

Security Systems usually takes time to use. For finding a security device, the Base Time depends on the Concealment rules (*q.v.*). For disabling a security device, a minimum of 1 Minute is standard, and the GM may increase that to 1 Minute per 10 Active Points in the device if appropriate (or, for simpler devices, decrease the interval to 1 Turn). In some cases it may take a character hours to get into place to disable some security devices and then do the work... though in a more cinematic game characters may not suffer from such difficulties.

SUBDIVIDING SECURITY SYSTEMS

For games involving a lot of infiltration work, the GM may want to split Security Systems into two distinct Intellect Skills: *Find Security Devices,* which replaces Concealment for that function; and *Disarm Security Devices.* Characters with either Skill could use another appropriate Skill, such as Electronics, to build and install security devices.

SECURITY SYSTEMS BY GENRE

Fantasy

As with Lockpicking, the GM must decide whether an ordinary Security Systems roll suffices to find or disarm a magical trap. If the magic involves penalties to Security Systems rolls, usually a Skill Roll (at the listed penalty) will find or disarm the trap; otherwise, it probably will not.

Pulp

The security devices of the Pulp era are surprisingly sophisticated. Advances in electronics, including the invention of the vacuum tube for radio, made it possible to build better devices than mechanically-triggered alarms. Pressure mats and plates, vibration detectors, and simple electric eyes were all available in addition to taut-wire alarms and similar mechanical devices. In 1929, a British company used infrared electric eyes to guard a display of silver at an exhibition. By the end of World War II, high-security areas had photoelectric eyes and window sensors.

Science Fiction

As with Lockpicking, Security Systems is a technology-dependent Skill. A high-tech crook can cut through low-tech systems with appalling ease, while low-tech intruders may not even know of the existence of advanced security systems until all hell breaks loose. Use the rules on Obsolete And Advanced Technology in Chapter One.

Western/Victorian

The first burglar alarm — a device with a spring that was released when a door or window was opened — was invented in the United States in 1858, so it's within the realm of possibility for such devices to exist in *Western Hero* and *Victorian Hero* campaigns. However, these early systems could only make noise at the scene. By the early 1870s, large cities in the eastern United States had more sophisticated alarm systems that could alert someone at a remote location.

SEDUCTION

Type: Interaction Skill (roll: 9 + (PRE/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

This Interaction Skill represents the ability to gain others' trust (and perhaps even friendship) by offering companionship or favors. Despite its name, Seduction has less to do with sexuality than with making friends or getting on another character's good side (though characters can certainly use it to seduce other people in the classic sense of the word).

USING SEDUCTION

The general rules for Interaction Skills (page 64) apply to Seduction, including rules about using the Skill on PCs, how targets resist the Skill, and the duration of the effect.

Typically characters cannot use Seduction to accomplish something more directly covered by another Interaction Skill. For example, they can't persuade someone to do things other than becoming friendly with them (on various levels); that requires Persuasion. However, Seduction may serve as a Complementary Skill to those Skills; and many Skills are Complementary to Seduction (see below).

Gaining Trust And Friendship

The primary use of Seduction is for a character to quickly strike up friendships with other persons, gain their confidence and trust, obtain minor favors from them, and so forth. Some characters just naturally have a winning manner, charisma, charm, personal magnetism, and/or knack for making friends, and Seduction represents this sort of ability.

The difficulty of a Seduction task, and the Base Time required, typically depend on how outrageous a favor the character wants, as summarized in the Seduction Table. The GM determines the difficulty category of a task, which may depend on factors the character doesn't know about. For example, if a character wants to become good enough friends with someone to borrow a cigarette from him, that's usually not too difficult — but if the character doesn't realize the target is poor and down to his last smoke (which changes the task from Very Simple to, say, Average) he may have a harder time than he expects.

If a Seduction roll to make friends and gain trust succeeds, the target befriends the character and trusts him — the greater the degree of success, the greater the degree of trust and confidence between them. If the roll fails, the character has not made a friend out of the target and won't be able to get him to do any favors. If it fails badly (by 4 or more), the target becomes disgusted or repulsed by the character, won't have anything to do with him, and if appropriate may alert the authorities about him or take other appropriate action.

Since this Skill reflects a character's ability to gain the trust (and perhaps friendship) of others by offering companionship or favors, some especially cute, adorable, or friendly animals (housecats, rabbits, Mon'da flutter-wings) may take it as a way to simulate their ability to gain and hold favorable human attention. A COM Roll may be Complementary.

SEDUCTION MODIFIERS

TASKS

Gaining Trust/Friendship	Base Time	Modifier
Very Simple Favor (become friends, borrow a cigarette)	1 Minute	+2
Simple Favor (provide simple, non-secret information)	5 Minutes	+1
Average Favor (do a minor favor)	20 Minutes	+0
Difficult Favor (reveal a secret; borrow a little money)	1 Hour	-2
Very Difficult Favor (reveal top secret information)	6 Hours	-4

Romantic Seduction	Base Time	Modifier
Very Easy ("Can I buy you a drink?")	1 Minute	+2
Easy ("Can I get your phone number?")	5-20 Minutes	+1
Average ("Want to go out on a date?")	1 Hour	+0
Difficult ("Let's go out on a date *right now.*")	2 Hours	-2
Very Difficult ("Let's go have sex right now.")	3 Hours	-4
Dream On ("Let's go have weird sex right now.")	4 Hours	-8

OTHER MODIFIERS

Gaining Trust/Friendship	Modifier
Granting favor exposes target to getting in trouble	-1 to -3
Granting favor exposes target to getting in *major* trouble	-4 to -6

Romantic Seduction	Modifier
Target not normally attracted to character's gender	-3 or more
Target already in committed relationship	-1 to -3

Romantic Seduction

Characters can also use Seduction in the more literal sense of the term: to win the romantic and/or sexual attentions of another person. The Seduction Modifiers table provides some typical examples; GMs can use them as guidelines for other situations and adjust them accordingly. For example, a character might use Seduction to convince a reluctant person to go on on a date or three with him. After that he might use Seduction to convince the target to have sex with him. Convincing someone to have sex soon after meeting them is difficult (as shown in the table), but the GM might rule that since the character's built up some affection and trust, this is only an "Average" task.

If a "romantic Seduction" roll succeeds, the character gains his objective. If the roll fails, the character "struck out," so to speak. If it fails badly (by 4 or more), the target becomes disgusted or repulsed by the character, won't have anything to do with him, and may take other appropriate actions — slapping him, throwing a drink in his face, accusing him of rape, filing a sexual harrassment suit, or the like. Fiendish GMs might even have a serious failure turn the target into a stalker — someone who becomes so obsessed with the character that he won't leave him alone, and whose attentions may become unpleasant or dangerous.

Planning The Approach

At the GM's option, a character with Seduction can use the Skill to observe the target for a while and determine the best way to approach him successfully. This requires a Base Time of 20 Minutes and a Seduction roll. If the roll succeeds, treat it as a Complementary Skill Roll for the character's main Seduction roll to achieve his objective (or, at the GM's option, allow the character to reduce the Base Time for that roll). If the roll fails, the character gains no valuable insight; if it fails badly (by 4 or more) he misjudges the target and suffers a -2 penalty on his main Seduction roll.



If a character has Lipreading (or Telepathy) he may be able to use it during the period of observation to gain further information about the target. See the *Lipreading* entry in this chapter for more information on that Skill.

Modifiers

The circumstances can easily modify a Seduction roll. In addition to Psychological Limitations and other modifiers common to all Interaction Skills (see page 37), the GM should consider things like whether granting a favor will cause the target problems (such as potential embarrassment, loss of his job, or getting arrested), whether the target tends to find persons of the character's gender attractive, whether the target's already in a "committed relationship," and so forth. Truly outrageous requests, regardless of the character's Skill Roll, should suffer severe modifiers — Seduction isn't Mind Control.

Complementary Skills

Many different Skills can serve as Complementary Skills for Seduction. They include:

■ a COM Roll (representing a character's doing his best to adapt his appearance to what he thinks the target likes)

■ Conversation (representing a character's witty and engaging conversational style and/or his ability to tease out facts he uses to help with Seduction)

■ Persuasion

■ High Society or Streetwise, for striking just the right "tone" with members of the upper and lower classes, respectively

■ Acting and Mimicry (if the character knows the target likes a particular "attitude" or accent and wants to copy that)

EQUIPMENT

Seduction doesn't involve equipment; it's a purely personal Skill. Flowers, candy, and a nice bottle of wine are entirely optional.

POWERS AND SEDUCTION

Mental Powers, specifically Mind Control, may make Seduction much easier (or remove the need for the Skill altogether). A character with low-level Mind Control might buy a high Seduction roll as a way of simulating the unconscious effects of his powers. Any Power that helps a character gather information on a Seduction target, such as Telepathy, Clairsentience, or some Enhanced Senses, may provide a slight bonus to the roll if the Power lets him find out useful tidbits of data.

CONSEQUENCES OF FAILURE

See above regarding the consequences of failed Seduction rolls.

BASE TIMES

The Seduction Table lists guidelines for Base Times for most Seduction tasks. The GM should keep in mind that like most Interaction Skills, Seduction depends a lot on interpersonal factors, so sometimes circumstances mean adjusting

the time required. For example, if the target of a Seduction attempt recently broke up with his "significant other" and is lonely and desperate, it may take a lot less time than normal to win him over with Seduction.

SUBDIVIDING SEDUCTION

In campaigns featuring a lot of social interplay and roleplaying, GMs may want to subdivide Seduction into two distinct Interaction Skills: *Charm,* the Skill for making friends and gaining the trust and confidence of others; and *Seduction,* the ability to seduce people in the literal sense of the world. Conversely, in games with little social interaction, GMs could combine Conversation, Persuasion, and Seduction into one Skill.

SEDUCTION BY GENRE

Generally Seduction works the same in all genres and time periods, though things may take a turn for the unusual in settings featuring multiple sentient species (such as many Fantasy and Science Fiction games. In a "realistic" multi-species setting, Seduction is only possible among members of the same species. Humans can seduce Humans, and Dwarves can seduce Dwarves, but a Human and a Dwarf cannot become romantically involved. Among members of a race from radically different cultures, GMs may wish to apply a penalty of -1 to -3 to reflect differing standards of romantic behavior. See the Seduction Race Table for suggested modifiers.

In more cinematic settings, where many species mix and mingle, interspecies Seduction is possible. Consult the Seduction Race Table and apply all relevant modifiers. For "Human," read "member of the character's own species," and make other appropriate changes.

If characters simply use Seduction to make friends or ingratiate themselves, the GM may wish to consider reducing or eliminating the penalties described above.

SEDUCTION RACE TABLE

Racial Form	Modifier
Externally very similar to humans	-0
Minor differences from human	-1
Non-human but mammalian	-2
Nonmammalian vertebrates	-4
Invertebrates	-6
Non-material/no physical form	-8
Additional Modifiers	
Race is asexual	-2
Race has specific mating cues (*e.g.,* scent, color)	-2

SHADOWING

Type: Intellect Skill (roll: 9 + (INT/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

Characters with this Intellect Skill can conduct surveillance of a person or place without being detected. As the name implies, it's most often used to follow someone on foot, on a mount, or in a vehicle, but characters can also use Shadowing to perform static surveillance of a building or other location. (This Skill does not allow characters to use devices such as wiretaps and bugs; that requires Bugging, which is discussed earlier in this chapter.) Additionally, the character knows how to spot and, if necessary, lose someone who's Shadowing him.

A character with Shadowing knows about the different methods and techniques for conducting both moving and static surveillance. He knows which ones work best in which situations and how to maximize the chances for a successful tail. Conversely, he knows the techniques for detecting and losing a tail. A character with Shadowing also knows how to use most types of long-distance surveillance devices, such as shotgun microphones and parabolic microphones, which are described below.

Depending on the situation, an appropriate Area Knowledge, City Knowledge, or other Knowledge Skill may act as a Complementary Skill Roll for Shadowing. Shadowing is an Everyman Skill for all genres.

FOLLOWING SOMEONE

The most common and basic use of Shadowing is to follow another person without being seen. This includes following persons who are on foot (or otherwise physcially moving under their own power), riding mounts, or in vehicles. Similarly, a character using Shadowing may be on foot, mounted, or in a vehicle, depending on the situation. Shadowing techniques apply regardless of how the character tails the subject.

As discussed below and noted on the Shadowing Modifiers table, different circumstances modify Shadowing rolls tremendously. For example, following someone in an area where there are few or no other people to "blend in" with (or other ways for the shadower to conceal himself) imposes negative modifiers (-1 to -5). On the other hand, it's much easier to follow someone in an area where there are lots of people to blend in with, cover for the shadower to hide behind, and so forth; this provides a +1 to +3 bonus.

A character who's Shadowing someone should make a roll when he begins following the subject. He should make another roll whenever the subject does something that makes it harder to follow him inconspicuously (like getting in an elevator), or if he takes actions designed to lose the tail (such as changing taxicabs, entering a store and running out the back door, using public transportation, or the like). A character (or group of characters) who's prepared to follow a subject may be able to avoid this, and likewise avoid (or diminish) penalties with

proper planning. For example, if the PCs suspect the person they're planning to follow is going to use public transportation, they could station someone to watch all the stops he's most likely to use; the person who spots the subject can alert the rest of the team before continuing the tail.

Multiple-Tail Techniques

To avoid detection, characters who want to shadow someone often do so in groups. That way each individual can "trade off" during the tail to avoid becoming conspicuous.

The most common multiple-tail method is the "ABC technique," which requires a minimum of three people, each of whom ideally has the *Shadowing* Skill: A follows the subject, B follows A, and C walks parallel to the subject (on the other side of the street or the like). Whenever a situation comes up where the tail might detect that he's being followed — such as when he turns a corner — A keeps walking straight (or otherwise leaves the tail), B continues tailing, and C falls in behind B. If appropriate, A can later come around and take C's former position. The more people available to employ in this sort of tail, the harder it becomes for the subject to detect the tail, since it's easy to take someone out of the rotation for good, or for long enough to change identifying details (put on a different color jacket, for example) and get back in the tail.

These same techniques apply to mounted or vehicular Shadowing, if the characters have three or more mounts/vehicles they can use. Similarly, some surveillance teams use a mix of on-foot and mounted/vehicular shadowing to maximize the chances of remaining undetected.

In game terms, you can usually represent a multiple tail by giving each member of the team a bonus to his Shadowing roll (see the Shadowing Modifiers table). Multiple-tail techniques often work best if the members of the tail can stay in contact inconspicuously, since conspicuous communication can easily spoil the whole effort. In modern cities, cellular telephones provide an excellent way to maintain communication, since they're ubiquitous. In some circumstances, a team of shadowers can attempt to minimize the obviousness of their communications through advanced preparation, such as designating prominent roads and landmarks with code words so that team members can relay information more quickly.

Shadowing In Vehicles

Characters in vehicles often try to shadow other vehicles — telling a cab driver to "Follow that taxi!" is a clichéd action movie phrase. In this situation, the vehicle operator's *Shadowing* Skill is what matters; vehicles themselves don't have Shadowing, and the fact that a passenger happens to have the Skill doesn't help.

If a vehicle operator Shadows another vehicle on a road with lots of traffic, Shadowing works normally; he may even get a +1 to +3 bonus to his roll if there's enough traffic to "blend in" with. Following another vehicle on a road with little or no traffic without being detected is much more difficult (-1 to -4 penalty). The same rules apply to Shadowing a pedestrian — if he stays in areas with lots of vehicles, vehicular Shadowing is easy; otherwise, it's hard to remain undetected.

The same applies with other types of vehicles, though it's rare for there to be so much ship or aircraft traffic in an area that a pilot can get a bonus for "blending in." In fact, the opposite applies; the fact that the vehicle in the rear is Shadowing the lead vehicle will probably become obvious at some point.

Progressive Surveillance

Most Shadowing activities are intended to observe the subject's specific actions or learn where he goes. *Progressive surveillance* is the use of Shadowing to determine a subject's traffic patterns, standard routes of travel, and the like. Assassins and terrorists often use progressive surveillance to evaluate targets and discover the best ways and places to attack them.

In most cases, progressive surveillance is easier than standard moving or fixed surveillance, since a character can conduct it from a distance and in ways that are less likely to reveal him to the subject. The GM may grant bonuses of +1 to +2 on Shadowing rolls to reflect this.

SPOTTING AND LOSING A TAIL

Shadowing also gives a character the ability to spot and lose a tail.

Spotting A Tail

If a character with Shadowing is being shadowed, his ability to spot the tail depends on whether his shadower made or failed his own Shadowing roll.

If the tail made his Shadowing roll, the character can make his own Shadowing roll in a Skill Versus Skill Contest to spot the tail. (If possible, the GM should make this roll, so as not to tip off the player.) The GM may allow a character without Shadowing to spot a successful tail with a PER Roll at a penalty (-3 or more), but this is not advisable in most circumstances.

If the tail failed his Shadowing roll, the subject only needs a successful PER Roll or Shadowing roll (whichever he prefers to use) to spot the tail.

If a character using Shadowing is particularly conspicuous for some reason, persons trying to detect whether he's tailing them get bonuses to their roll (see the Shadowing Modifiers table). Conversely, if the tail can make quick, inconspicuous changes to his appearance — adding or removing a layer of clothes, switching hairstyles or wigs, and so on — that may make it harder to detect him.

A character who does not have Shadowing may still have a chance to detect a tail with a PER Roll. However, the GM should impose a penalty of -2 or more on this roll for the sake of dramatic sense, verisimilitude, and game balance.

Of course, there are occasions when a tail doesn't care if he's spotted — he just wants to know where the character's going, or maybe he's trying to intimidate the character. That tends to make Shadowing much easier (+2 or greater bonus), though it may also expose the tail to an attack.



Confirming And/Or Losing A Tail

Once a character knows (or suspects) he's being tailed, there are lots of tricks he can use to try to confirm the tail... and if necessary lose it. (Sometimes a character won't want to lose his tail; instead, he'll prefer to lead the tail where he wants the tail to go.) Here are some possible techniques which can usually either (a) grant the subject a +2 to +4 bonus to his own Shadowing rolls to detect, confirm, or lose a tail, and/or (b) force the tail to make another Shadowing roll as described above (possibly with a -2 to -7 penalty):

■ getting into a vehicle and leaving the tail on foot behind

■ speeding up or slowing down

■ stopping to look at something (particularly helpful if the character can look into something reflective, like a store window, and watch what the suspected tail does; the GM may permit the character a Shadowing roll to do this)

■ going into a building and either waiting for a while, or leaving by a different entrance

■ making unpredictable turns and stops to see what the suspected tail does

■ pulling a "reverse" — turning around and traveling in the opposite direction so the suspected tail either has to keep moving, or turn around too (and thus expose himself)

■ walking around a blind corner and stopping immediately, then waiting to see if the tail comes around the corner

■ engaging in deliberately erratic movement, then watching to see who responds to this by mimicking the movement pattern

■ going through a "choke point" or other travel "channel" so that shadowers have to follow the subject directly, rather than in parallel

■ driving through a red light, a border crossing, a train track just before a train passes, or other "barrier"

STATIC SURVEILLANCE

Better known as a "stakeout," static surveillance occurs when a character remains in a specific location to watch another, nearby, location — typically a building, but sometimes a parked car or the like. This tends to be a time-consuming and tedious job, but usually a vital one. It's often done in pairs so one of the watchers can sleep or go to the bathroom without the chance of missing something important.

Choosing A Vantage Point

If appropriate, the GM may have the character make a Shadowing roll to pick the best location from which to establish static surveillance. The optimum location is one that provides an excellent view (of all entrances to the location, if possible), that lets the character get in and out quickly and without arousing anyone's suspicions, and allows the character to take pictures or film without difficulty. However, conditions are rarely optimum, and a failed roll in this instance may indicate that there's no good location from which to stake out the target. In that case, the GM may impose penalties on further Shadowing rolls, as appropriate.

SHADOWING MODIFIERS

General Modifiers	Modifier
Subject takes "anti-tailing precautions"	-2 to -7
Shadower can easily hide from subject's view	+1 to +3
Shadowing On Foot	**Modifier**
Lots of people to "blend in" with	+1 to +3
Few or no other people around; character may "stand out"	-1 to -5
Target uses a stairwell or an elevator	-1 to -3
Target uses public transportation	-1 to -3
Vehicular/Mounted Shadowing	**Modifier**
Lots of traffic to "blend in" with	+1 to +3
Little to no traffic; following vehicle may "stand out"	-1 to -5
Target uses public transportation	-1 to -3
Multiple-Tail Techniques	**Modifier**
Having 3-4 shadowers	+1
Having 5-8 shadowers	+2
Having 9+ shadowers	+3
Shadowers use inconspicuous means of communicating	+1
Shadowers use conspicuous means of communicating	-1 to -3
Static Surveillance	**Modifier**
Inconspicuousness	
Character stands out racially, sartorially, or the like	-1 to -3
Character blends in racially, sartorially, or the like	+1 to +2
Spotting A Tail	**Modifier***
Tailing character is conspicuous	
Noteworthy appearance (unusually tall, heavy, and so on)	+1 to +2
Has relevant Distinctive Features	+2 to +5
Has high or low COM	+1 per 3 COM †
Tailing vehicle is conspicuous (unusual make or color, and so on)	+2 to +3
Proximity	
Tailing character has to stick close to the subject	+1 to +2
Tailing character can maintain his distance	+0 to -1
Tailing character can inconspicuously alter his appearance during the tail	-1 to -3
Subject takes active steps to detect a tail (see under "Losing A Tail")	+2 to +4
Subject has other people helping him try to spot tail	+0 to +3

*: These modifiers are to the subject's Shadowing or PER Roll to detect, confirm, or lose the tail.

†: Or fraction thereof over 10 or under 6.

Remaining Inconspicuous

Once a character has established his stakeout, the GM can have him make a Shadowing roll to "be inconspicuous." It doesn't do the character much good if the target, his neighbors, the local Star Patrol, or casual passers-by can tell he's staking out the target. Success on a Shadowing roll allows the character to "blend in" with the locale as much as possible. The Shadowing roll made to choose the location (if any) acts as a Complementary Skill Roll, and the GM may impose other modifiers based on the circumstances. For example, if the character is of a different race than other people in the neighborhood, dresses differently, drives a car that seems out of place, or the like, the GM might impose a -1 to -3 modifier to the inconspicuousness roll. (To save time, the GM may combine the "choose vantage point" and "inconspicuousness" rolls into one.)

For longer-term static surveillance, characters can often avoid a lot of these problems (and rolls) by moving in — literally. Renting a residence or office within viewing distance of the target provides a cover and privacy, making the whole stakeout much easier. The best locations tend to be above the target (but not too far above) and not directly across from him... but sometimes a character has to take what he can get.

MONITORING THE MAIL

A character with Shadowing knows techniques for opening a person's mail and reading it without the subject knowing his mail has been tampered with. Various techniques — steaming open the envelope (or using other "dry open" methods that don't involve damaging the envelope), rolling up the letter with a knitting needle and slipping it out of the envelope at the unsealed corners, spraying the envelope with Freon (which temporarily makes the envelope transparent, but then dries without a trace) — allow a character to do this, and Shadowing gives him knowledge of them. Typically these methods require an unmodified Shadowing roll and a Base Time of 1 Minute (possibly longer). If the person who mailed the letter has taken anti-tampering measures (see below), the character must pit his own Shadowing roll against the sender's Shadowing roll in a Skill Versus Skill Contest.

Similarly, Shadowing tells a character how to take steps to avoid these techniques if he thinks someone's tampering with his mail. For example, he could tape envelope corners to foil the knitting needle method and wrap letters in black paper to prevent the Freon trick from working. This usually requires an unmodified Shadowing roll and a minimum of 1 Turn (possibly longer); use the character's Shadowing roll result for any Skill Versus Skill Contests to read his mail (see above).

EQUIPMENT

Just about any type of mundane equipment that assists in observing or gathering information about someone — such as binoculars or cameras — can help a character use Shadowing, even if it provides no bonuses to his roll. Additionally, some types of equipment are designed primarily to assist with observing people. (Shadowing does not allow characters to use devices such as wiretaps and bugs; that requires Bugging, which is discussed earlier in this chapter.)

SHOTGUN MICROPHONE

Effect: +6 versus Range Modifier for Hearing Group
Target/Area Affected: Self
Duration: Constant
Range: Self
Charges: 1 Continuing Fuel Charge lasting 1 Hour
Breakability: 2 DEF

Description: A shotgun microphone is a microphone with a special long tube attached to it to narrow the area over which it picks up sound, thus effectively extending the distance it can pick up sound over. They're often used by television sports reporters and the like, but they're just as good for surveillance. A similar type of equipment is a *parabolic reflector,* which uses a parabolic dish to focus sound on an ordinary microphone.

Game Information: *+6 versus Range Modifier for Hearing Group (9 Active Points); OAF (-1), Nonpersistent (-¼), 1 Continuing Fuel Charge lasting 1 Hour (-0). Total cost: 4 points.*

Options:

1) Strong Shotgun Mike: Increase to +10 versus Range Modifier for Hearing Group. 15 Active Points; total cost 7 points.

2) Weak Shotgun Mike: Decrease to +4 versus Range Modifier for Hearing Group. 6 Active Points; total cost 3 points.

Surveillance Vehicles

A character who does a lot of Shadowing, such as a private investigator, may want to have a vehicle that's specially equipped for the task. In addition to the best communications and surveillance equipment he can obtain (such as radios, video cameras and the like), he might equip the vehicle with:

■ tinting or curtains to cover the windows so observers can't see inside

■ a concealed power system that can keep vehicular equipment working even when the engine's not turned on

■ stabilization pegs (pegs that insert into the axle when the vehicle is parked so that the vehicle doesn't rock or shake when people inside it move around)

■ a covert periscope that can turn in 360 degrees

■ interior controls that allow the driver to change or disable the exterior and interior lights, and/or extra headlights (so the driver can alter the vehicle's "profile" by using different sets of headlights)

■ onboard amenities, such as a refrigerator, a toilet, or a cot

POWERS AND SHADOWING

A number of Powers can make Shadowing much easier and likely to succeed.

Movement Powers

Exotic Movement Powers such as Flight and Teleportation may help a character with Shadowing because they make it easier to follow the subject regardless of what he does or how he moves. For example, people rarely tend to look up, so using Flight makes it easier to follow someone unnoticed in some circumstances. Teleportation lets a character move from hiding place to hiding place without having to move "in the open," thus greatly decreasing the likelihood of being spotted by the subject. (Of course, these benefits are moot if the special effect of the power makes it easy to notice, such as a character whose Teleportation creates a flash of bright light.)

Enhanced Senses

A character with the right Enhanced Senses can keep track of the subject he's tailing without the need for equipment. The *Telescopic* Sense Modifier for Sight and/or Hearing makes it possible to maintain a discrete distance from the subject but still keep track of what he does and says. Similarly, a Sense that can perceive the target through solid objects (such as N-Ray Perception) may make it possible to tail a subject without the need for any Skill Rolls.

Senses or Sense-like Powers that work from a distance, such as Clairsentience and Mind Scan, may also greatly aid Shadowing.

Images

Used discreetly and judiciously, Images may help a character with Shadowing hide himself from the subject. Similarly, Images may allow him to instantly change his appearance and thus keep the subject from realizing that a single person is following him. (The same can be said of Shape Shift and Multiform in some instances.)

Invisibility

Invisibility to the Sight Group may make Shadowing ludicrously easy. On the other hand, using it may pose some difficulties in crowded conditions because other people won't see the character and thus may run right into him. In that case, the simplest solution may be for the character to follow the subject *very* closely, so that he's essentially "in his wake" and thus only has to worry about his coming to a sudden stop.

CONSEQUENCES OF FAILURE

Generally speaking, a failed Shadowing roll means one (or more) of three things:

1. The character lost the subject (the subject deliberately or accidentally did something that allowed him to "get away from" the character; the character has to go to the bathroom or looks away, and the subject is gone when he returns; or the like).

2. The character revealed himself to, or was otherwise somehow "spotted" by, the subject. (In this case, the subject may engage in countersurveillance, such as the methods of actively trying to lose a tail described above, or he may simply take steps to make the character's efforts useless.)

3. The character Shadowed the subject properly, but nevertheless failed to gather the information he sought (for example, maybe he wanted the subject to lead him to the crimelord's headquarters, but the subject didn't go there).

PROGRESSIVE SURVEILLANCE

Roll (2d6)	Time
2	1d6 x 10 minutes
3-5	1d6 x 20 minutes
6-7	1d6 x 1 hour
8-9	1d6 x 2 hours
10-11	1d6 x 4 hours
12	Will not go there today

If a character succeeds with a Luck roll, he can alter the rolled result by one step up the table for each point of Luck rolled.

SHADOWING EVENTS

Roll (2d6)	Event
2	Subject is highly distracted; character gets a +3 bonus on Shadowing rolls to avoid being detected.
3-5	As 2, but the character gets a +1 bonus
6-7	No unusual events
8-9	An obstacle or difficulty (such as a red light or needing to go to the bathroom) arises; character must make another Shadowing roll at -2 or lose the subject.
10-11	As 8-9, but the character must make another Shadowing roll at -4 or lose the subject (alternately, failure may mean the subject spots the character).
12	As 10-11, but the character must make another Shadowing roll at -6.

If a character succeeds with a Luck roll, he can alter the rolled result by one step up the table for each point of Luck rolled.

In most cases, if the character fails the roll by 1-3, only one of the failure results applies. If he fails it badly (by 4 or more), two or three of them could apply. The GM decides how many apply, and which ones. For the sake of drama, "lost the subject" is often the best choice (since it gives the characters the chance to try again), but "subject spots the character" can lead to exciting chase scenes (or even combat).

If the GM rules that the failed roll means the subject detected the shadower, then the tail may continue, but all further Shadowing rolls must be made at a penalty equal to the amount by which the character failed the initial roll. This represents the subject's becoming suspicious, taking precautions, and the like. For example, suppose Blade fails his Shadowing roll to follow Pokerface by 3. The GM decides this means Pokerface has spotted Blade and become suspicious that he's being tailed. All further rolls by Blade and/or his teammates to follow Pokerface are at a -3 penalty (in addition to any other modifiers).

If the character used Shadowing to try to spot or lose a tail, a missed roll means he failed to do so. His actions may alert the tail that the tail has been detected (they almost certainly do this if he fails by 4 or more).

If a character is following somebody to learn the way to a specific place, who the target is visiting, patterns of travel, or the like (progressive surveillance), the subject may not go where character desires (the third possible result of failure described above). If the GM would like to inject an element of randomness into Shadowing process, he can roll on the accompanying Progressive Surveillance table to determine how long it takes the subject to go where the character wants him to go (measure the time from when the character starts to Shadow the subject).

Another way to make the Shadowing process more random is to roll on the accompanying Shadowing Events table and apply the results.

BASE TIMES

There's no specific base time for Shadowing — the time required for a Shadowing task depends on the actions of the subject. The Progressive Surveillance table lists some Base Times for that activity.

SUBDIVIDING SHADOWING

The GM may decide to divide Shadowing into two Intellect Skills: *Shadowing* (used to follow people, spot and lose tails, and so forth) and *Surveillance* (for performing static surveillance). Alternately or in addition he could divide Shadowing into *Tailing* and *Spot Tail.*

SHADOWING BY GENRE

Generally speaking, Shadowing functions the same in all genres. The only things that change are the methods of travel available and the technologies available for communication and searching.

Cyberpunk/Near Future

In this genre (and in some Science Fiction settings), Shadowing may become pointless due to the prevalence of satellite observation technology. Rather than follow a subject on foot or in a car, the characters keep an eye on him with cameras mounted on orbital devices.

Fantasy

In a Fantasy game, magic may help a character shadow someone... or let a subject know he's being tailed. For example, a wizard could cast an invisibility-spell on his familiar and order the familiar to follow someone and report back to say where he went. A person who fears being followed may establish a warding-spell (defined as Detect Shadowing or the like, as the GM desires) to alert him if someone tails him. Travel-magic, such as teleportation spells, may make it easy to lose a tail.

SKILL LEVELS

Type: None
Cost: 2-10 Character Points per Level (see text)

Skill Levels provide bonuses to related Skills. (Skills may be related without being in the same category; the GM is the final judge of whether or not Skills are related.) The cost for Skill Levels is indicated on the accompanying table.

USING SKILL LEVELS

A character can only apply a Skill Level to one task at a time. He can change how his Skill Levels are assigned as a Zero Phase Action. However, unless the GM permits otherwise, he may not change the assignment of his Skill Levels more than once in a Phase.

Generally speaking, characters cannot use their Skill Levels in a "Persistent" fashion (such as saying, "My Skill Levels are always assigned to PER Rolls unless I state otherwise"). Just like Combat Skill Levels, Skill Levels are not Persistent and should not be treated as such. It's up to the GM to decide whether the circumstances justify allowing a character to keep his Skill Levels "active" for a long period of time.

2-POINT SKILL LEVELS

The two-point Skill Level applies to any one Skill Roll or Characteristic Roll. However, typically characters only buy them for Characteristic Rolls, since most Skills with a roll can improve it for the same cost (and unlike 2-point Skill Levels, those bonuses can be Limited).

3-POINT SKILL LEVELS

Three-point Skill Levels apply to any three related Skills. The GM determines whether three Skills are "related." Typically any three Skills in the same category (Agility, Intellect, Interaction, Perceptive, Technological) qualify. Knowledge Skills and Science Skills are usually "related" to similar Intellect Skills — for example, SS: Electronic Engineering relates to Electronics and Systems Operation.

A character cannot apply a 3-point Skill Level to all Skills bought through a particular Skill Enhancer; it would only apply to three of the Skills. A 5-point Skill Level could be bought to apply to all Skills in a specific Skill Enhancer.

Limited Skill Levels

The smallest Skill Level on which a character can place a Limitation is a 3-point Level. Because of this, a character may find himself in a situation where it costs more to buy Limited Skill Levels with a particular attack than it would if he just bought less expensive Skill Levels — even though the cheaper Skill Levels are *less* restricted. In that case, the GM may, at his option, allow the character to buy the less expensive Skill Levels and treat them as if they were Limited, without actually applying the Limitation to them.

SKILL LEVELS TABLE

Cost	Type of Level
2 points	+1 with one Skill or Characteristic Roll
3 points	+1 with any three related Skills (*e.g.,* +1 with Culture Knowledge, High Society, and Seduction; +1 with Mechanics, Security Systems, and Lockpicking)
5 points	+1 with a group of similar Skills (*e.g.,* +1 with all Agility Skills)
8 points	+1 with all non-combat Skills
10 points	+1 Overall Level (see text) (*i.e.,* +1 with any Skill Roll or Characteristic Roll). Characters can also use Overall Levels as Combat Skill Levels.

5-POINT SKILL LEVELS

The 5-point Skill Level applies to "a group of similar Skills." Typically this means all Skills based on a particular roll (such as all Agility Skills), but the final determination rests with the GM. A 5-point Skill Level with all INT-based Rolls also applies to PER Rolls, unless the GM rules otherwise.

Characters cannot buy 5-point Skill Levels with "all Background Skills." Instead, they must apply a 5-point Level to one type of Background Skill: KSs, PSs, or SSs.

8-POINT SKILL LEVELS

The 8-point Skill Level applies to all non-combat Skills. In effect they're the counterpart of the 8-point "all combat" Combat Skill Level.

10-POINT "OVERALL" SKILL LEVELS

The 10-point "Overall Level" can apply to any Skill Roll, Characteristic Roll, PER Roll, Contact roll, Find Weakness roll, Attack Roll in normal or Mental combat, Breakout Roll, or any other roll the GM approves. (Some GMs forbid characters to apply them to rolls they feel characters have no "control" over, such as some Activation Rolls or Required Skill Rolls.) Characters can also use Overall Levels as if they were Combat Skill Levels to improve CV, ECV, the damage done by an attack, or for any other use to which a CSL can be put. (Except for Overall Levels, Skill Levels do not apply to Combat Skills.)

MOVEMENT SKILL LEVELS

Skill Levels with one or more Movement Powers are known as *Movement Skill Levels.* They have several uses.

First, a character can use a Movement Skill Level to lower his Turn Mode by 1 (minimum of 0"). However, he's still restricted to making no more than five turns in a single move, unless the GM rules otherwise.

Second, each Skill Level provides a +1 to any roll required to land in, or otherwise move to, a particular hex.

Third, at the GM's option, the character can use a Movement Skill Level to increase his acceleration or deceleration with his modes of movement (not with vehicles) by 1" per hex per Skill Level applied.

Fourth, at the GM's option, a character can use Levels with movement to improve his DCV if he Dodges or uses a Combat or Martial Maneuver that provides bonuses to DCV while moving.

Skill Levels with one mode of movement cost



ALTERNATE MOVEMENT SKILL LEVELS

Power	Cost Per 1 Movement Skill Level
EDM	N/A
FTL Travel	N/A
Gliding	3 Character Points
Flight	3 Character Points
Leaping	2 Character Points
Running	2 Character Points
Swimming	2 Character Points
Swinging	2 Character Points
Teleportation	2 Character Points
Tunneling	1 Character Point

2 Character Points per Level. Skill Levels that apply to any of a character's modes of movement cost 3 Character Points per Level.

Changing Movement Skill Levels

In some campaigns, GMs may find that Movement Skill Levels are too useful. They not only improve a character's Turn Mode, they can also sometimes improve his DCV while he's moving, help him to accelerate and decelerate, and so on. That's a lot of utility for 2 Character Points per Level! If this causes problems in the campaign, the GM should increase the price of "MSLs" — at least to 3 Character Points per Level, and possibly 5, for Levels that only apply to one type of movement, and at least to 5 Character Points for Levels that apply to all modes of movement.

Alternately, the GM could change the cost of Movement Skill Levels for a single Movement Power based on the Power they apply to, since they're more useful for some Movement Powers than others. The accompanying table has a list of suggested costs.

OPTIONAL RULE: NEGATIVE SKILL LEVELS

Certain powers or abilities, such as some curses in a Fantasy game, involve making a character less capable — in short, they apply negative Skill Levels to another character. At the GM's discretion, a character may impose a -1 on any one Skill for 3 Character Points, a -1 to any Skill Roll with a group of similar Skills for 5 Character Points, or a -1 to any Skill Roll for 10 Character Points. Negative Skill Levels that apply to more than one Skill must be assigned to a single Skill in any given Phase by the character inflicting them (for example, a Negative Overall Level could decrease the target's Security Systems roll one Phase, and his PER Roll the next Phase; it doesn't decrease all of the target's Skills every Phase). Changing the allocation of a Negative Skill Level is a Half Phase Action. This "Power" is No Range, Constant, and costs END; using it to affect the target requires an Attack Roll. Each point of Power Defense negates one Negative CSL, Negative Penalty Skill Level, or Negative Skill Level.

Example: *The wizard Murgald has 5 points of Power Defense. In Segment 9 two enemy spellcasters attack him. One inflicts a Curse Of Inaccuracy (-8 Negative CSLs); the other inflicts a Curse Of Incompetence (-7 Negative Skill Levels). Because he has 5 points of Power Defense, Murgald suffers only -3 CV and -2 to Skill Rolls.*

EQUIPMENT

Skill Levels don't require equipment; they're a purely personal Skill.

BASE TIMES

Skill Levels don't take any time to "use," *per se.* As noted above a character has to use a Zero Phase Action to change the allocation of his Skill Levels.

SKILL LEVELS BY GENRE

Skill Levels work the same in all genres and eras.

SLEIGHT OF HAND

Type: Agility Skill (roll: 9 + (DEX/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

This Agility Skill represents the ability to palm items, fool the eye, do some simple magic tricks, and perform other tasks and tricks involving legerdemain and deft use of the hands (often combined with a certain degree of misdirection, patter, and body positioning). Characters use it for everything from entertaining their friends, to cheating at cards, to slipping poison into someone's wine, to picking pockets.

Using Sleight Of Hand

Most uses of Sleight Of Hand involve a Skill Versus Skill Contest of some sort. Typically the character makes his Sleight Of Hand roll against the PER Roll of the person he's using the Skill against — sometimes it's a Sight PER Roll, sometimes Touch. At the GM's option, a character with Sleight Of Hand can use that instead to oppose attempts to use the Skill on him. The GM may choose to impose a -1 or greater penalty on PER Rolls to detect the use of Sleight Of Hand on the grounds that a character with Sleight Of Hand has paid Character Points for that ability (and should therefore be quite skilled at what he does), whereas PER Rolls are free.

Unlike many Skills, most uses of Sleight Of Hand require close, even in some ways intimate, contact between the character and his victim. If a character can't get close enough to his target, he can't use Sleight Of Hand, no matter how high his Skill Roll. (But see *Powers And Sleight Of Hand,* below.)

Sleight Of Hand has many uses, including:

PICKING POCKETS

The first thing most characters think of when they think of Sleight Of Hand is picking pockets — removing items from someone's pocket, a purse, or the like surreptitiously, and often for larcenous purposes. The Skill Roll is modified by the looseness of the pocket, its size, its location, the size of the object involved, and similar factors (see the Sleight Of Hand modifiers table).

Pickpocketing typically has a Base Time of a Full Phase. At the GM's option, a character can combine pickpocketing with some other Action, such as a Move By, if he can make his roll at a -4 penalty (this takes the place of the standard rule for performing a Skill more quickly than usual).

At the GM's option, before going in to actually lift an object from someone's pocket, a character can use Sleight Of Hand as a Full Phase Action to covertly feel the pocket and make an educated guess as to what's in it. If the roll succeeds, the character has at least a rough idea of what's in the pocket, and he may know exactly based on its shape and other tactile qualities. The roll serves as a Complementary Skill Roll to the roll to actually pick the pocket. If it fails, he has no idea what (if anything) is in there; if it fails badly (by 4 or more) he misjudges the pocket's contents in ways that have negative consequences for him (typically a -2 or worse penalty to the roll to pick the pocket).

Putpocketing

Characters can also use Sleight Of Hand for *putpocketing.* Putpocketing is the opposite of pickpocketing; it involves putting an item *into* someone's pocket or onto their person without being detected. This might be done to plant false evidence on someone, as part of a magic trick, to place a tracking device on a person without his knowing it, and the like. It uses the same modifiers and other rules as for pickpocketing.

Characters can also use putpocketing to do things like surreptitiously inject another character with a knockout drug — the victim won't feel the injection (though he will feel the drug when it starts to take effect and realize someone's drugged him). This requires the appropriate equipment, a Full Phase, and a successful Sleight Of Hand roll at -2. If the roll fails, the target notices what the character was trying to do; if it fails badly (by 4 or more) the character loses his "weapon," accidentally injects himself, or suffers some similar problem.

PALMING ITEMS

Sleight Of Hand allows a character to "palm" an item — hide it with his hand using deft and clever movements. The size of the item modifies the roll. At the GM's option a character can choose to use his Concealment roll in the Skill Versus Skill Contest to perceive what's going on.

MAGIC TRICKS

Characters can use Sleight Of Hand to perform simple magic tricks involving palming items, manipulating cards, and the like. They do *not,* however, have an in-depth knowledge of prestidigitation and legerdemain; to perform anything more than the most basic of tricks they need KS: Magic Tricks, PS: Stage Magician, or some other Skill the GM deems gives them knowledge of many magic tricks.

Most of the simple magic tricks that a character can perform with Sleight Of Hand alone have a Base Time of a Full Phase, or perhaps an Extra Phase. Some long tricks involving a lot of display and patter may take 1 Turn or more.

DISGUISING GESTURES

In settings in which characters can cast spells and use other abilities that have the *Gestures* Limitation, at the GM's option a character can use Sleight Of Hand to confuse or disguise what he's doing. That means onlookers can't ascertain what spell he's casting or ability he's using just by watching his hand motions. This requires a Half Phase Action and the character must make his Sleight Of Hand roll at -1 per 10 Active Points in the spell/ability being used. If the roll succeeds, onlookers can tell nothing about what he's doing based on hand movements. If it fails, his Gestures look the way they normally do; if it fails badly (by 4 or more) he may mis-cast the spell, suffer a penalty or reduction in effect for the ability, or the like.

DRAWING WEAPONS UNSEEN

With a successful Sleight Of Hand roll modified for the size of the object (and perhaps the way it's carried), a character can draw a weapon without being seen to have done so. This requires a Half Phase Action. If the character succeeds, his weapon's drawn but no one knows it (yet... see below). If he fails, the weapon remains undrawn; if it fails badly (by 4 or more) the weapon gets snagged and the character loses his entire Phase. If the character also has Fast Draw, he can do this as a Zero Phase Action if he succeeds with a roll for both Skills.

A character can also use Sleight Of Hand to hide the fact that he's holding a weapon that's ready for use. He must succeed with a roll each Phase (as a Zero Phase Action once the weapon's in his grasp); if he fails, someone notices that he's holding a weapon. See page 180 regarding using Fast Draw to bring the "hidden" weapon into play.

FEINTS AND FOISTS IN COMBAT

At the GM's option, characters can use this Skill as a Half Phase Action to perform "feints" or "foists" in combat. This means the character's trying to "fake out" his opponent, creating an opening he can exploit. For every 2 points the character makes his Sleight Of Hand roll by, he gains +1 to his OCV, up to a maximum of +3. However, each time after the first he tries this against a particular opponent, he takes a cumulative -2 penalty to his Sleight Of Hand roll. Thus, sooner or later a recurring enemy learns the character's tricks and how to avoid them. Other characters who have watched the character fight, or who make the character's Reputation roll, may also know of his tricks, thus earning the same bonus even if this is the first time he's ever fought them.

If the character fails his Sleight Of Hand roll, and his opponent makes a PER Roll at -2, the character suffers a -2 OCV penalty on his attack, since his target has seen through the "feint" and knows what to expect.

The GM should not use this rule if he's using the optional new *Feint* Skill described later in this chapter.

GAMBLING

In some cases cheating at a game of chance involves a device (like a gadget that can control a roulette wheel) or clever manipulation of cards or dice via sleight of hand. To use such methods, a character needs more than Gambling — he needs the device or the *Sleight Of Hand* Skill. In the latter case, use Sleight Of Hand as Complementary to Gambling.

POISONING FOOD

A classic Fantasy "bit" is for an assassin or ruthless nobleman to slip poison into a character's food or drink without him noticing — a fiendish use of Sleight Of Hand. To do this, a character has to get close enough to the food or drink to touch it, then find an excuse to reach near the food or drink so he can covertly drop the poison in. This requires a Full Phase and a successful roll; failure means the character didn't put the poison where he wanted it, so it becomes useless (and of course he now runs the risk of discovery if perceived). A bad failure (by 4 or more) means someone (possibly the victim) sees what the character does. Of course, depending on what that person thinks about the potential victim, this may not inconvenience the character at all.

REMOVING CLOTHING

A clever Sleight Of Hand artist can actually remove articles of clothing from a person's body without that person realizing it! This is most often done with belts and neckties. A character who uses his Sleight Of Hand to commit crimes can also steal wristwatches and jewelry right off a person, whether it's pinned on or simply worn. He can also remove items that hang from clothing, such as the identity badges people often wear at work, conventions, and the like.

For more combat-oriented characters, they can use Sleight Of Hand to remove another person's weapon from its holster or sheath. In some cases they might even sneak up and surprise an enemy by stealthily removing the magazines from his guns!

SLITTING PURSES

A variant of pickpocketing popular in Fantasy eras and other settings when people often wear pouches on their belts is *cutpursing* or slitting purses. With a deft hand and a razor-sharp blade, a character can cut the ties binding a pouch to a belt, or slit open the pouch and take the contents, without being noticed. This tends to be a little harder than ordinary pickpocketing (-1 penalty).

SWALLOW AND REGURGITATE ITEMS

At the GM's option, a character with Sleight Of Hand can swallow small objects — usually nothing bigger than, say, a cork from a bottle of wine — and regurgitate them at will. Swallowing takes a Full Phase; regurgitation requires 1 Turn and a successful Skill Roll. Failure means the item remains inside the character; a bad failure (by 4 or more) poses the risk of the character choking to death.

WATCH MANIPULATION

Besides using Sleight Of Hand to steal wristwatches (see above) a character can use it to change a watch — move the indicated time backwards or forwards — by taking a Full Phase and succeeding with a Skill Roll. Changing the time by up to one hour in either direction entails no penalty; each additional hour (or fraction thereof) imposes a cumulative -1 penalty.

MODIFIERS AND COMPLEMENTARY SKILLS

The Sleight Of Hand Modifiers table summarizes the primary modifiers for Sleight Of Hand. Additionally, any injury to a character's hand typically counts as a "significant injury" for purposes of the "injury" Skill Modifier discussed in Chapter One. If a character uses a partner to distract the target of his Sleight Of Hand, he may receive significant bonuses (or the GM can let the partner make his Acting or Sleight Of Hand roll as Complementary).

Because many uses of Sleight Of Hand involve misdirecting the victim, often through clever talk ("patter"), the GM may allow characters to use Conversation as a Complementary Skill for Sleight Of Hand in some instances. Conversation may also allow a character to use speech to cover the noise made by a noisy object he tries to pickpocket. In some cases Contortionist may help a character reach a pocket he wants to pick (or the like) and thus serve as Complementary.

Other Rules

EQUIPMENT

Sleight Of Hand doesn't involve equipment; it's a purely personal Skill.

POWERS AND SLEIGHT OF HAND

For a character capable of changing the shapes of his hands, this Skill becomes relatively easy. Extra fingers can hold things while the hand appears empty, compartments can open up within the body to hide small objects, and so on.

A character can only use Telekinesis to perform tasks with Sleight Of Hand if (a) he has the *Fine Manipulation* Adder on his Telekinesis, and (b) the GM specifically permits him to. The GM might want to require the character to buy another Adder, *Can Use Sleight Of Hand,* for +5 or +10 Character Points to allow the character to use Telekinesis this way.

CONSEQUENCES OF FAILURE

Generally speaking, failing a Sleight Of Hand roll doesn't automatically mean the target notices the character (an exception to the usual rule in Skill Versus Skill Contests) — the target still has to succeed with his PER Roll to notice what happened. If the PER Roll fails, the character's failure simply means he didn't achieve his objective. If the Sleight Of Hand roll fails badly (by 4 or more), the target notices the attempt automatically, without any need for a PER Roll.

BASE TIMES

Unless noted otherwise above, the Base Time for Sleight Of Hand tasks is a Full Phase.

SUBDIVIDING SLEIGHT OF HAND

If the GM thinks this Skill provides a character with too many abilities, he could split it up into two or more Skills, such as *Pickpocketing* (the ability to pickpocket, putpocket, remove articles of clothing, slip poison into food, and the like) and *Palming* (the ability to hide items with the hand, perform minor magic tricks, cheat at games, and so on).

SLEIGHT OF HAND BY GENRE

Generally, Sleight Of Hand works the same in all genres and time periods. There have been pickpockets almost from the day mankind invented the pocket, and card manipulators from the day card games were first played for money.

SLEIGHT OF HAND MODIFIERS

General Circumstances	Modifier
Size Of Object	
25% size of hand or less	+2
26-50% size of hand	+1
51-75% size of hand	+0
76-100% size of hand	-1
101-110% size of hand	-2
111-120% size of hand	-3
121-130% size of hand	-4
131-140% size of hand	-5
141% size of hand or larger	Generally not possible
Awkwardly shaped object	-1 or worse
Working with a partner	+1 or better
Pickpocketing/Putpocketing	
Size Of Pocket	
Less than 100% size of object	Not possible
100-110% size of object	-2
111-125% size of object	-1
126-150% size of object	+0
151-175% size of object	+1
176-200% size of object	+2
201% size of object or larger	+3
Tightness Of Pocket	
Tight	-1
Loose	+1
Location Of Pocket	
Money belt	-7 or worse
Interior jacket pocket	-1
Front pants pocket	-0 to -1
Back pants pocket	+1 to -1
Belt pouch, fanny pack	+1
Purse, backpack	+2
Item can be noisy (*e.g.,* a ring of keys)	-1 or worse
Cutpursing	-1
Target is distracted	-1 or greater penalty to his PER Roll
Removing Clothing/Items	
Belt	-2
Necktie, bowtie	-4
Pants, shirt	-6
Jewelry	
Pinned	-4
Clasped	-3
Worn	-2
Hanging items	-2

STEALTH

Type: Agility Skill (roll: 9 + (DEX/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

Characters with this Agility Skill can hide in shadows, move silently, and/or avoid detection (particularly in combat or crisis conditions). They know various techniques for remaining unobserved, including how to camouflage themselves so they blend into the background. Stealth is an Everyman Skill for all genres.

USING STEALTH

When a character wants to be stealthy (whether that's moving silently, not being seen, or the like), he must make a Stealth roll. If he succeeds, his roll becomes the target for PER Roll in a Skill Versus Skill Contest with anyone who's trying to find him (or who might perceive him even if not actively trying to). If the character's trying to remain unseen, his opponent makes a Sight PER Roll; if he's trying to move silently, the opponent makes a Hearing PER Roll. (Of course, if a character has an applicable Enhanced Sense, such as bonuses to Smell PER Rolls, the GM can let him use that Sense as well, or instead.) If the Stealth roll fails it doesn't necessarily mean anyone perceived him; other characters still have to make a PER Roll to do so (it's just a lot easier for them to succeed now). If the roll fails badly (by 4 or more) the character's done something to draw attention to himself — tripped and fallen, stepped on a cat, bumped up against a vase and knocked it over — so that everyone in the vicinity perceives him without having to make a PER Roll.

STEALTH MODIFIERS TABLE

Moving Silently	Modifier
Surface moved upon	
Very Soft floor/surface (plush carpet)	+2
Soft floor/surface (ordinary carpet)	+1
Average floor/surface (wood, tile, linoleum, cement)	+0
Noisy floor/surface (squeaky floorboards, lots of underbrush)	-2
Very Noisy floor/surface (strewn with dried leaves)	-4
Footwear	
Hard-soled	+0 to -1
Soft-soled (incl. sneakers)	+0 to +1
Barefoot	+2
*Movement speed**	
Running (6"+)	-1
Trotting/Jogging/Running Slowly (3-5")	+0
Walking (2")	+1
Crawling/walking slowly (1")	+2
Hiding	**Modifier**
Lots of hiding places/cover (crowded city street, forest)	+4
Some hiding places/cover (typical furnished room, barn)	+2 to +3
Average hiding places/cover (sparsely-furnished room)	+0 to +1
Few hiding places/cover (field with a few bushes in it)	-1 to -2
Very Few hiding places/cover (barren field, empty room)	-3 to -4

*: Making a Stealth roll typically requires a Half Phase Action, which restricts the amount of movement a character can use with the Skill.

Characters can't use Stealth if they're already being observed — it's not Invisibility. If someone's already watching or listening to a character, he can't make a Stealth roll and "vanish." He has to find some way to break the line of sight/hearing, such as running around a corner or causing a momentary distraction that makes the observer look away so he can't be perceived. Then he can make a Stealth roll to hide or start moving silently so that when the other person comes looking for him (*i.e.,* tries to re-establish perception of him), he won't find him.

Stealth most commonly affects the Sight and Hearing Sense Groups. However, technically it applies to *all* Senses, including unusual ones such as Combat Sense and Danger Sense, unless the GM rules otherwise based on considerations of game balance, common sense, and dramatic sense. For example, an ordinary human probably couldn't use Stealth to avoid the Smell/Taste Group Senses of a dog, since there's no real way to "hide" body scent. However, the GM might allow it if the character could, for example, rub himself with something to disguise or conceal his normal body scent, or could make a Stealth roll to realize which way the wind is blowing so he can stay downwind from the dog to minimize his chance of being smelled. Similarly, hiding from Unusual Senses or Senses defined as belonging to no ordinary Sense Group, like Combat Sense and Danger Sense, can pose game balance problems. Even a hidden danger may constitute a danger, allowing a Danger Sense roll — which would become a Skill Versus Skill Contest against Stealth, if the GM felt that was appropriate.

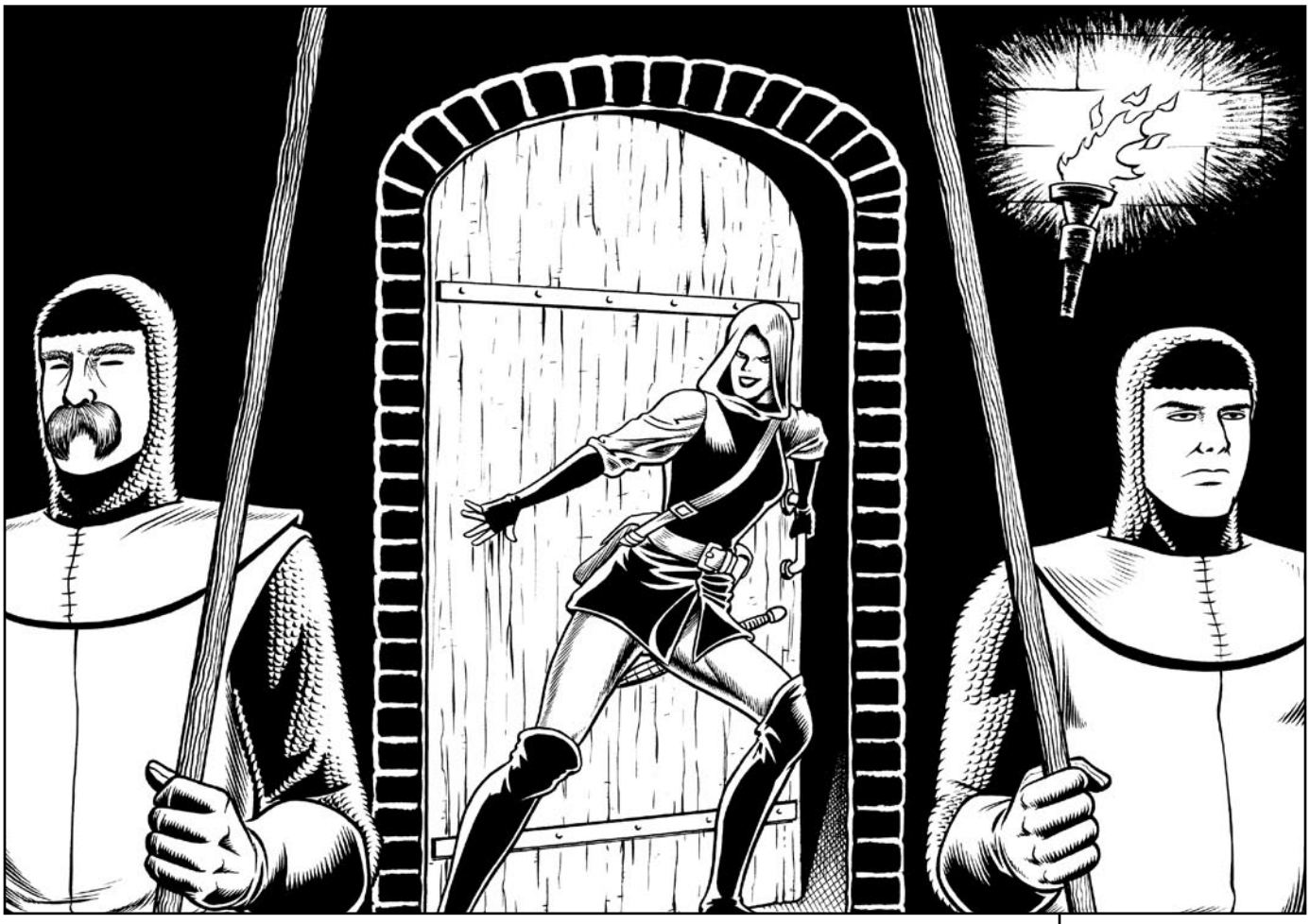
Stealth applies equally to all forms of movement. No mode of movement is inherently "stealthier" than any other. Moving slowly makes it easier to use Stealth to move without being heard, while moving quickly makes it harder; see the Stealth Modifiers table.

Creating Distractions

At the GM's option, a character can use Stealth to create a particularly effective distraction that makes his main use of Stealth easier. For example, he might throw a small object to create a noise nearby so that people look that way, or arrange to have something happen at just the right time so he can slip past a guard unnoticed. To do this, he must take a Full Phase and succeed with a Stealth roll, usually at a penalty of -1. If the roll succeeds, it serves as a Complementary Skill Roll for his main use of Stealth.

Helping Others Be Stealthy

At the GM's option, a character with Stealth can help others be stealthy by showing them where to hide, where and how to step to avoid making noise, and so forth. This requires a Full Phase Action the first Phase the character does this in, and a Half Phase Action in all succeeding Phases until the group stops being stealthy. The roll suffers a penalty of -1 for one additional person, -2 for two to three people, -3 for four to seven people, -4 for eight to 15 people, and so on.



Hiding One's Self

A character may hide himself from a search using Concealment (for example, Andarra could wedge herself behind a console to hide from the Denebian Secret Police search team). A character should use Stealth for any active concealment, such as when he tries to move silently; only use Concealment when nonmoving persons try to hide themselves for a long period of time (more than a Turn). For shorter periods of time, a character can hide himself using either Concealment or Stealth (his choice), and with the GM's permission he can use the other Skill (if he has it) as Complementary. (At the GM's option, for simplicity's sake any of a character's efforts to hide or conceal himself use Stealth; in this case Concealment becomes a Skill just for hiding and finding objects and the like.)

Inobtrusiveness

At the GM's option, a character can use Stealth not to literally hide, but to "fade into the background" in a group of people so he goes unnoticed. To do this, he must make a Stealth roll (and of course must avoid doing anything that would draw attention to himself). If the roll succeeds, he remains generally unnoticed by the rest of the group — some people might see him there but pay no attention to him, others never even realize he was there. If one were to examine photographs of the scene later, he'd clearly be there (he's not invisible), but somehow no one notices him. If the roll fails, people realize he's there and take note of his presence normally; if it fails badly (by 4 or more) the character accidentally does something to call attention to himself, attracts peoples' interest by being *too* mysterious, or the like.

Stealth Shadowing

A truly stealthy character can walk right behind someone, keeping very close (within 1") to his rear so he can't see the character and matching his footsteps and movements to conceal the noise of walking. This requires a Stealth roll at -4.

MODIFIERS

In addition to the general modifiers for Agility Skills discussed in Chapter One, such as Encumbrance, various modifiers apply to specific uses of Stealth. See the Stealth Modifiers table for details. Unusually large or small characters have modifiers (defined by their *Size/Weight* Physical Limitation or the abilities they purchased, respectively) based on size.

Note also that the PER Roll modifiers discussed on pages 353-54 of *The HERO System 5th Edition, Revised* apply to the PER Roll made to perceive a character using Stealth. Sight modifiers apply normally (*e.g.,* on a "dark night" people trying to perceive a character using Stealth suffer a -4 penalty). However, Hearing PER Roll modifiers apply in *reverse* — a listed bonus becomes a penalty, since loud noises make it harder to hear a character skulking around using Stealth.



EQUIPMENT

Stealth does not require equipment; it's a purely personal Skill. However, some types of equipment may make it easier. As noted in the Stealth Modifier table, softer footwear may make it easier to move silently. Similarly, camouflage clothing may make it easier for a character to hide in some circumstances and environments. In settings with advanced technology or magic, characters may wear "chameleon fields" or cast "spells of stealthy movement" that make using Stealth even easier.

POWERS AND STEALTH

As noted on page 102 of *The HERO System 5th Edition, Revised* rulebook, most Powers have perceivable special effects. If appropriate, the GM can allow a character to use Stealth to hide the use of a Power — to dampen the visible effect, muffle the noise it makes, and so forth. The character has to make a Stealth roll at -1 per 10 Active Points in the power. If he succeeds, other characters have to defeat him in a Stealth Versus PER Roll Contest to perceive the use of the Power, as discussed above; failure also works the same way as above.

Invisibility in some respects qualifies as a "superior" version of Stealth, making the Skill unnecessary. Super-skills representing the ability to be ultra-sneaky are often built as Invisibility with a Required Stealth Roll.

A character with Images can more easily use Stealth by "concealing" himself (or another character using Stealth) with an Image that affects the relevant Sense Groups. This requires a Zero Phase Action every Phase the Images are maintained and an INT Roll (and if the character covered by Images is moving, the Images effect has to be able to move as well). If the INT Roll succeeds, the Images' PER Roll penalty applies as a bonus to the Stealth roll (with a minimum of +1, even if the Images hasn't bought any penalty). If the roll fails, the character gets no bonus; if it fails badly, he suffers a -2 or worse penalty on his Stealth roll.

CONSEQUENCES OF FAILURE

See above regarding how to handle a failed Stealth roll.

BASE TIMES

Typically using Stealth requires only the usual Half Phase for making a Skill Roll. If a character has to cross a large area while remaining silent, or remain hidden during a lengthy search, he has to keep using Stealth that entire time, making a roll each Phase (if the GM's tracking time by Segments) or once per period of time defined by the GM.

SUBDIVIDING STEALTH

Stealth is one of the most helpful and common Skills in the rules — one that practically every character in every campaign can justify learning and get a lot of use out of. As such, a GM may find it a little too prone to abuse. To counteract this he can split it into two distinct Agility Skills: *Hide,* which characters use to conceal themselves from Sight PER Rolls; and *Move Silently,* which characters use to not make noise (*i.e.,* conceal themselves from Hearing PER Rolls).

STEALTH BY GENRE

Stealth works the same in all genres, though more advanced eras may have more powerful sensor technology, thus making Stealth more difficult to use successfully. (On the other hand, Stealth gear also improves in such societies.)

STREETWISE

Type: Interaction Skill (roll: 9 + (PRE/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

This Interaction Skill gives a character knowledge of the seamy side of civilization. He knows how to find the black market, talk to thugs and criminals, gain information about underworld activities, deal with organized (and not so organized) crime figures, and so on. He also knows who the main powers are on the street and in the underworld and the location of their spheres of influence. In short, he's thoroughly familiar with the seamy side of life.

In some respects, you can think of Streetwise as being the countepart of High Society. It fulfills many of the same functions (see below), but for the lower-class elements of society (typically meaning criminals and their ilk) rather than the upper crust. Many of the rules noted below function more or less the same for both Skills, though there are some important differences as well.

Encourage players to roleplay this Skill as much as possible; it's a lot of fun.

Cultural Differentiation

As a default, Streetwise gives a character the ability to use the Skill in *any* lower-class social situation, regardless of the culture involved. (But see *Subdividing Streetwise,* below.) However, characters typically learn Streetwise for their native culture and time. Underworld customs and etiquette can vary wildly from one human culture to another, and even within some large cultures — and that doesn't even take into account the possibility of life on other worlds/dimensions or involving non-human sentient species. Therefore the GM may impose penalties on a Streetwise roll when a character uses the Skill in a culture different from his own (see the Streetwise Modifiers table). A character with an appropriate Knowledge Skill (usually a Cultural Knowledge, but at the GM's option possibly an Area/City Knowledge) does not suffer these penalties for that culture, and in fact those Skills may serve as Complementary.

With the GM's permission, a character may be more familiar with a particular foreign culture than with his own. For example, an American raised in Russia might understand the Russian underworld and organized crime groups better than those of the United States.

Streetwise And Other Skills

Streetwise often interacts with or serves as Complementary to other Skills (particularly other Interaction Skills). Some disguises or uses of Acting only work if the character also has Streetwise (or at least are much less convincing without it). Streetwise and Bribery often go hand in hand, since bribing people is illegal in many nations/cultures.

USING STREETWISE

Streetwise has six main uses: finding information on the street; finding people on the street; understanding street etiquette and slang; locating and interacting with the black market; identifying who's who on the street; and interacting with (and sometimes manipulating) criminal groups.

Finding Information Or People

The most common uses for Streetwise are to dig up information (who killed Johnny G.? who's selling heroin in Irishtown? which Freetown gangs are the toughest? which robber has a *modus operandi* like the one seen at this crime scene?) and to find people who are in hiding (or otherwise difficult to locate). The GM should assign any attempt to use Streetwise in this fashion a "difficulty rating," as listed in the Streetwise Modifiers table, and use that to determine how hard the task is.

If the roll succeeds, the character typically either learns what he wants to know, or learns where he can. However, the GM should keep several things in mind. First, a successful roll doesn't mean the character instantly knows everything there is to know — he may just have found the person who does know, and now has to convince him to reveal the information through threats, bribery, blackmail, the use of Conversation, Interrogation, or Persuasion, or some other method. (This is one of the reasons Streetwise has so much roleplaying potential.) Second, learning the information may make the character a target — the tough people who run the streets often don't like it when nosy people ask questions. Alternately, the GM can let the character roll, and after seeing how much the character makes the roll by determine what he's learned (which may net the PC *some* information, just not necessarily what he was looking for).

If a Streetwise roll to find information or persons fails, the character didn't find what he was looking for, and is even more likely to alert unfriendlies that someone's snooping around. If it fails badly (by 4 or more), he definitely attracts unwanted attention — if someone doesn't come after him right then and there, powerful underworld figures have taken note of him and may make life difficult for him later on. Alternately he spooks the person he's looking for, who flees far beyond his reach.

Some cultures may be so closed or difficult to penetrate that characters using Streetwise to find out about them suffer a -1 to -3 penalty (possibly more). This applies to almost all gangs, organized crime groups, and the like. A character who has an appropriate Knowledge Skill (such as KS: The Mafia or KS: Colombian Drug Cartels) does not suffer this penalty due to his advanced knowledge of the subculture in question, and the KS might even be a Complementary Skill. Those sort of KSs definitely serve as Complementary Skills when the character uses Streetwise to identify prominent mob members, different gang symbols and colors, and the like.

STREETWISE MODIFIERS

Information/Person Is...	Modifier	Base Time
Extremely Secret/Extremely Very Well Hidden	-6 to -8	1 Week
Very Secret/Very Well Hidden	-3 to -5	1 Day
Secret/Well Hidden	-1 to -2	6 Hours
Average Secret/Hidden	+0	2-5 Hours
Known/Poorly Hidden	+1	1 Hour
Widely Known/Very Poorly Hidden	+2	20 Minutes

Cultural Differentiations: Culture Is...	Modifier
Very Similar to character's own	+0
Similar to character's own	-1
Dissimilar to character's own	-2
Very Dissimilar to character's own	-4
Completely Dissimilar to character's own	-6
...of a different species/planet/dimension	-1 (additional)

Other Circumstances	Modifier
Closed subculture (see text)	-1 to -3
Character doesn't know native language	-3 to -5 (or worse)

Black Marketeering

A character can use Streetwise to obtain special equipment (and other items) from the black market. Typically the black market counts as an "Average" or "Secret" thing for a character to find. A successful roll means the character's contacted the black market; failure means he can't find it, and a bad failure (by 4 or more) that he's scared the black marketeers away and has no chance of making contact for at least 1 Week. Once a character finds the black market, he may have to make another roll to convince black marketeers that he's a legitimate customer, and Trading rolls to negotiate the best deal for himself.

Street Etiquette And Street Slang

Streetwise can represent a character's ability to get along in underworld and lower-class social situations (and if necessary to pass himself off as a member of the lower class) by drawing on his knowledge of "street etiquette" and social customs appropriate to the culture and gathering. This includes things like how to dress, talk, and act to fit in with gangsters, thugs, mafiosi, and street culture people in general. Streetwise is Complementary to Acting and Disguise when a character tries to pass himself off as belonging to these groups.

At the GM's option, a character who hasn't purchased a particular form of street or criminal slang as a Language may be able to understand it (and even speak it) by making a Streetwise roll at a -1 to -3 penalty. He has to make a roll every Phase, though, so his comprehension may be sporadic.

Who's Who In The Underworld

A character can use Streetwise to know "who's who" in the underworld. This covers two general subjects. The first is who the people in the underworld actually are, and some basic facts about them, particularly their role in the world of crime and the street ("Him? That's Johnny Deuce, a gambler with the Morellis" "That's Howie Wendell, a cheap punk and two-time loser"). Second, he's aware of the positions in the general underworld social structure, who outranks who, and so forth. For example, he knows that a Mafia capo generally leads a Mafia family... but he'd also know that thanks to his wealth, influence, and skills, a particular captain in that family is actually better-regarded by the rank and file members.

Using either of these functions takes a Half Phase. If the roll succeeds, the character knows what he wants to know. If it fails, he's not aware of that information; if it fails badly (by 4 or more) he makes a mistake that may hurt him later on — for example, he misidentifies a powerful underworld figure as a nobody (or vice-versa).

Related to this is knowledge of lower-class social protocol. A character who succeeds with a Streetwise roll understands who "outranks" who and how to treat people accordingly.

Underworld Goings-On

Characters with Streetwise are attuned to the way lower-class people act and to the social dynamics of lower-class groups. After spending at least 1 Hour interacting with a group of lower-class persons, the character can make a Streetwise roll. If he succeeds, he gains some insight into what's going on among the group — who likes or dislikes who (no matter how they actually act in public), who's planning to betray who, who's secretly sleeping with who's woman, and so on. The more the roll succeeds by, the more the character learns, though he rarely learns anything specific or definite; it's more like having strong hunches or making educated guesses. If the roll fails, the character learns nothing; if it fails badly (by 4 or more) he leaps to a mistaken conclusion.

Once a character has properly assessed the dynamics of an underworld or lower class group, the GM might allow him to try to manipulate that group to suit his own purposes. Usually it's best to handle this through roleplaying, but if appropriate to the campaign the character might simply have to succeed with a Streetwise roll to get some or all of the group's members to think or act the way he wants them to.

EQUIPMENT

Streetwise doesn't involve equipment; it's a purely personal Skill.

POWERS AND STREETWISE

As with most Interaction Powers, a touch of Mental Powers — especially if a character can conceal their use — can work wonders in conjunction with Streetwise. It's much easier to evaluate, learn from, and even manipulate a group (or its members individually) with a little Mind Control, Telepathy, or Mental Illusions.

CONSEQUENCES OF FAILURE

See the text above for discussion of the consequence of failing Streetwise rolls.

BASE TIMES

See the Streetwise Modifiers table for the Base Time for using Streetwise to find information or persons, and the text for the Base Time of other tasks.

SUBDIVIDING STREETWISE

For some campaigns it may be more "realistic" or appropriate for the GM to require characters to buy Streetwise by categories. The categories are defined by culture (or perhaps by species, in multiple-species campaigns), or possibly even by cities or organized crime groups. The first category costs 2 Character Points for a PRE-Based Roll, each additional category costs +1 Character Point. Thus, characters would buy Streetwise (Russian Culture) or (Dwarven Culture) or (Denebian Culture). In some cases, the GM may allow a character to make a roll for a culture he hasn't bought, but which is similar to one he had bought, at a -2 or greater penalty.

STREETWISE BY GENRE

In many ways, Streetwise functions the same from genre to genre, though it's most common in the Dark Champions and Superhero genres. Any human civilization has plenty of criminals and low-lifes for characters to interact with.

Science Fiction

What constitutes "the lower class" and how to behave properly in it and interact with it aren't just culture-specific, they're time-dependent. Time travelers, dimension-hoppers, and interstellar tourists may experience serious problems. Unless a character has an appropriate Area Knowledge or Culture Knowledge for a time period more than a century removed from his home era, he suffers penalties to his Streetwise rolls — typically -1 per 100 years or fraction thereof, but this may depend on the "realism" level of the campaign. For example, a cinematic time traveler's penalty is never more than -2, no matter how far back he goes.

Similarly, as noted in the Streetwise Modifiers table, an "alien" culture (one on a planet other than the character's own, or that he's raised on) typically suffers at least a -1 in addition to the standard cultural differentiation penalty. In a cinematic campaign, characters' penalties may be capped at -2 (-1 for different planet, -1 for different species). In realistic settings (Cyberpunk or Hard SF, for example) the penalties are steeper: -3 for all alien cultures, with an additional -2 if the aliens have different dietary habits or environmental requirements.

Superheroes

In a Superheroes campaign, Streetwise may provide at least some basic information about supervillains. Generally superhumans are a culture apart, dealt with through KS: The Superhuman World (or a similar Skill), but many villains have regular contact with the mundane underworld. A Streetwise roll might reveal to a character who Lazer's been hanging out with lately or that the "m.o." on a job matches Black Harlequin's usual pattern of behavior.



SURVIVAL

Type: Intellect Skill (roll: 9 + (INT/5) or less)
Cost: 2 Character Points for a base roll with one category (or 1 Character Point for a base roll with a specific subcategory); each additional category costs 2 Character Points (and each additional subcategory 1 Character Point); +1 to the roll with all categories and subcategories known per +2 Character Points

Characters with this Intellect Skill can live off the land and survive in wilderness or dangerous areas without the need for things like grocery stores, camping gear, or the like. See *Using Survival,* below, for a general list of things that characters can do with Survival.

A character with Survival knows a little about the animals and plants native to his purchased environment(s) — their general behavior and properties, which ones are dangerous, which ones are edible (or not, or even poisonous). His knowledge isn't as comprehensive as that of a character with a relevant KS or SS, but it helps keep him safe and alive. He knows something of weather prediction. He may know about many related topics as well; the GM can expand the knowledge Survival imparts to a character as seems appropriate. Appropriate KSs or PSs (KS: Mountain Flora, KS: Jungle Fauna, PS: Predict Weather, and so on) serve as Complementary Skill rolls. However, Survival does not include knowledge of tracks (that's Tracking), how to find one's way through the wilderness (that's Navigation), how to build elaborate traps for large beings (that's Security Systems, but see below), how to treat wounds or diseases (that's Paramedics or the like), or how to use weapons.

SURVIVAL ENVIRONMENT GROUPS

Arctic/Subarctic
Arctic/Subarctic Coasts
Arctic/Subarctic Plains (Tundra)
Arctic/Subarctic Forest (Taiga)

Mountains

Temperate/Subtropical
Temperate/Subtropical Coasts
Temperate/Subtropical Forests
Temperate/Subtropical Plains
Temperate/Subtropical Swamps/Marshes

Tropical
Tropical Coasts/Pelagic Environments
Tropical Forests (Jungle)
Tropical Plains (Savannah)
Tropical Swamps/Marshes

Deserts
Scrub Deserts
Sand Dune Deserts
Salt Marshes

Marine
Surface
Underwater

Urban

Note: This list of environments applies primarily to Earth-like locales. GMs should create their own environment groups if their campaign settings are radically different from Earth (see *Science Fiction* in the main text for further guidelines).

Purchasing Survival

Characters purchase Survival by different types of environments — knowing how to survive in the desert doesn't guarantee you can survive in arctic conditions, for example. (But see *Cross-Environment Compatability,* below.) Each environment category (such as Arctic/Subarctic, Mountains, or Tropical) costs 2 Character Points for a (9+(INT/5)) or less roll; subcategories (such as Arctic/Subarctic Plains or Tropical Forests (Jungle)) cost 1 Character Point apiece if a character wishes to buy them separately. Improving the Skill Roll with all categories and subcategories the character knows costs 2 Character Points for each +1 to the roll.

The accompanying text box lists the Survival categories and subcategories. The GM is free to add to this list if he wants; this would be particularly appropriate for campaigns set in bizarre Fantasy worlds, involving the exploration of multiple planets, and so forth.

At the GM's option, a character in an unfamiliar environment may be able to use his Survival for some tasks at a penalty; see *Cross-Environment Compatability,* below.

Using Survival

The following rules, guidelines, and modifiers apply to characters' use of Survival.

GENERAL RULES AND GUIDELINES

A character should make Survival rolls primarily when he's underequipped for a particular area — if he's marooned, has lost his survival gear or food stores (or had them stolen), and so forth. If a character has the proper equipment for sustained wilderness living (a tent or like form of shelter, proper clothing, food and water supplies, and the like), generally he doesn't need to make Survival rolls, though the GM may require them if appropriate (such as when weather conditions are particularly severe).

In most situations, a character should make his Survival roll on a daily basis to see if he's found food, shelter, and other necessities. The GM might require him to make more frequent rolls in particularly harsh or dangerous environment (in an arctic area during a blizzard, for instance), or if the character uses Survival to help other people survive as well.

As general modifiers, lack of available resources like tools, food, water, and clothing impose a -1 to -5 modifier to the Survival roll, while very benign conditions (good equipment, plentiful game, lots of water) could mean a +1 to +3 modifier. (See the sec-

MULTIPLE-PERSON SURVIVAL

Number Of Persons	Survival Modifier
1 (the character himself)	-0
2	-1
3-4	-2
5-8	-3
9-16	-4
...and so on	

tions below for environment- and task-specific modifiers that can replace or supplement these general modifiers as the GM sees fit.) Knowledge Skills relating to the creatures and plants in the area are Complementary to Survival; so are PSs related to Survival tasks. In particularly hazardous environs, appropriate KSs might even be necessary to use Survival (it doesn't matter how many fish a hero catches if he can't tell the poisonous ones from the edible ones).

A successful Survival roll usually means the character has found enough food, shelter, and other necessities to keep himself alive and moving (though maybe just barely). Failure can be damaging to the character; failing the roll several days in a row could be fatal (see *Environmental Effects* on pages 438-43 of *The HERO System 5th Edition, Revised* rulebook).

The sections below detail several common uses of Survival, along with specific modifiers for them (usually based on environment, since some types of terrain are easier to survive in than others).

Of course, regardless of how high a character's Survival roll is, he cannot overcome the absolute limits imposed by the environment. For example, if there's no water to find (such as on the Moon), he can't locate any with Survival no matter how well he rolls (even a 3).

Helping Multiple People Survive

The rules for Survival generally assume a character's only trying to keep himself alive and healthy. But sometimes a character has to forage for or protect a group of people (such as his adventuring comrades, or a group of rescued campers). The more people he tries to help with his Survival abilities, the harder it becomes, as indicated on the accompanying table.

FOOD

The first thing on many characters' minds when they're stranded in the wilderness is food. Survival allows a character to find or obtain food, and to prepare it in basic ways so it's safe and palatable to eat.

Foraging

The first way to find food is to forage for it and gather it up. This includes looking for, finding, and identifying nuts, fruits, roots and tubers, carrion, mushrooms, insects, and so forth. The Foraging Table lists the modifiers for foraging in various environments; characters should roll once per hour. Success indicates enough food to feed one person for one meal (if the GM uses the degree of success rules, higher degrees of success mean the character found more food). If the character made the roll despite the multiple-person penalty, then he finds enough food to feed that many people for one meal — but he may prefer to forage without the penalty for multiple hours, hoping for enough successes to feed two or more people.

The ability to forage also includes the ability to identify edible foodstuffs. Once a character finds food, he may make another Survival roll (usually unmodified for any environment category he knows) to determine if said food is edible, inedible, or (worst of all) poisonous. (He can use this aspect of the Skill with captured or killed game as well.)

Hunting, Trapping, And Fishing

Instead of just trying to find food, the character can actively try to catch it or kill it. Survival includes the ability to make snares to catch small game (rabbits, quail, fish, and the like), though not the ability to build deadfalls, pit traps, and other devices for catching or injuring large animals or humans (that requires Security Systems). It also includes the ability to drive animals into an ambush or dead end (but not to lure them with false calls; that's Mimicry). And it includes the ability to fashion crude fishhooks and lines, and with the GM's permission even simple hunting weapons (sharp-pointed spear-like sticks for gigging fish and frogs, stones for throwing [and perhaps crude slings as well], and so forth). Creating true weapons that can stand up to actual combat or use against large animals requires Weaponsmith (page 351).

In most cases, a successful Survival roll indicates the character found an appropriate food animal and caught or killed it somehow; it's not necessary to make Attack Rolls or damage rolls. But the GM can turn hunting into more of a combat-like affair if he feels it would add drama to the game or give characters the chance to use other Skills (such as Stealth or Combat Skill Levels) to improve their odds of obtaining food.

The Hunting/Trapping/Fishing Table lists the modifiers for hunting, trapping, fishing, and similar activities in various environments; these modifiers apply both to the actual attempt to obtain food and to the effort to make the proper tools (if the GM requires a roll for the latter). How often characters get to roll depends on the GM's judgment on how common the type of game they're searching for is; once per hour would be the maximum in most cases, but once per three to six hours may be more appropriate for most environments.

SURVIVAL (URBAN)

A character with this Skill knows how to beg for food or clothing, where he can sleep out of the elements and free of charge, how best to avoid the general notice of the city guard, and how to spot a person likely to give a poor starveling a dollar or two. It's an essential skill for beggars or anyone attempting to survive in a city without a coin to his name.

FORAGING TABLE

	Climatic Zone		
Type Of Environment	Arctic	Temperate/Subtropical	Tropical
Coast	-2	-1	-0
Desert*, sand dune	—	—	-5
Desert, scrub or salt marsh	—	—	-3
Forest	-0	+2	+4
Marine	-0	+1	+2
Mountains	-4	-2	-1
Plains	-2	-0	+1
Swamp/Marsh	—	+2	+4
Urban	+2	+2	+2

*: Deserts have only one modifier, since they're effectively a climatic zone of their own; this is listed under "Tropical" for convenience.

HUNTING/TRAPPING/FISHING TABLE

Type Of Environment	Climatic Zone: Arctic	Temperate/Subtropical	Tropical
Coast	-0	+1	+2
Desert*, sand dune	—	—	-5
Desert, scrub or salt marsh	—	—	-3
Forest	+1	+2	+4
Marine	-0	+1	+3
Mountains	-3	-2	-0
Plains	-1	+1	+2
Swamp/Marsh	—	+2	+4
Urban	-0	-0	-0

*: Deserts have only one modifier, since they're effectively a climatic zone of their own; this is listed under "Tropical" for convenience.

FINDING WATER TABLE

Type Of Environment	Climatic Zone: Arctic‡	Temperate/Subtropical	Tropical
Coast†	N/A	N/A	N/A
Desert*, sand dune	—	—	-8
Desert, scrub or salt marsh	—	—	-4
Forest	+2	+3	+4
Marine†	N/A	N/A	N/A
Mountains	+2	-0	+1
Plains	+2	+1	+2
Swamp/Marsh†	—	N/A	N/A
Urban	+5	+5	+5

*: Deserts have only one modifier, since they're effectively a climatic zone of their own; this is listed under "Tropical" for convenience.

†: Water is always present in these environments; the issue is not finding it, but making it potable.

‡: Arctic environments usually have snow or ice available, thus providing a ready source of water if the character has the means to melt and purify it.

Food Preparation

Once a character obtains food, he has to prepare it for eating. While a lot of foraged food can be consumed as-is, most people don't enjoy raw meat. Preparing a game animal, scavenged carrion, or the like to eat usually requires requires a fire (see below) and an unmodified Survival roll; if the character has PS: Cooking he may use that instead, with Survival as a Complementary Skill. (In any event, Survival isn't as good as PS: Cooking.) The character should roll once per animal carcass butchered and dressed, or once per meal prepared, as the GM sees fit.

Characters can also use Survival to prepare food for long-term storage so they can carry it with them as they travel. This requires a Survival roll at -1. Success preserves the food for 1d6+1 days; failure by 1-3 leaves only 1d6 x 10% of the food edible within the next day, and failure by 4 or more ruins the food altogether.

WATER

Even more important than food in many cases is water. Without water, a character can quickly dehydrate, which may kill him in and of itself but also exposes him to problems like heat exhaustion and heat stroke. The Finding Water Table lists the modifiers for finding water in various environments. This includes not only locating bodies of water (lakes, streams, and the like) but gathering rainwater, digging for water, and obtaining water from plants like cacti, palms, and bamboo.

Making Water Drinkable

Sometimes a character can find water, but it's not drinkable. This is particularly common in salt marshes, some types of swamp/marsh terrain, and along sea and ocean coasts where the water is too salty to drink. Even seemingly safe water probably needs treatment to remove harmful bacteria and the like, or to strain out mud and other contaminants. Drinking nonpotable water may expose a character to disease (especially cholera, dystentery, and typhoid) or to the ingestion of flukes or leeches.

Removing dirt and the like from water requires a filtering system. This may be as simple as letting the water sit still so particles settle to the bottom, or it may require filtration through a pants leg, hollow log, or other container filled with a filtering material (such as sand, crushed rock, or charcoal). This requires an unmodified Survival roll; success means the water is ready for purification, failure that it remains contaminated (but the character can try again).

After a character filters out contaminants, he has to purify the water. The easiest ways to purify water are to boil it, or to use water purification tablets or iodine if they're available. If the GM requires a Survival roll for this, it's at +3 (assuming the character has fire and/or the right equipment) or -0 (if not). Failure indicates the water remains undrinkable.

FIRE

In most situations where a character needs to use Survival, it's important for him to have access to fire. With fire he can cook food, purify water, signal for help, and keep himself warm. Even deserts can become cold enough at night for a character to suffer from exposure.

First a character has to have something to burn. Usually this means wood, but he could use the wreckage of his plane, dried leaves or dung, or the like. If appropriate, the GM may require the character to make a Survival roll to gather enough fuel for a fire that will last through the night (12 hours); the character receives a +3 bonus in any type of forest, and no modifier in other environments (except for marine, where kindling a fire is usually impossible).

FIRESTARTING TABLE

Firestarting Method	Modifier
Match, flint and steel	No roll necessary*
Firebow	-0
Firesaw (rubbing sticks together)	-1
Convex lens and sunlight	-1
Conditions	**Modifier**
Windy or snowy weather	-2
Rainy weather	-4
Wet wood	-2
Kindling	
No kindling	-3
Little kindling	-1

*: In normal conditions



Before lighting a fire, a character may wish to take measures to prevent it from being seen, protect it from the wind or water, and so forth. This may involve digging a firepit, erecting a simple "firewall" of sticks or stones, or the like. This requires an unmodified Survival roll, if the GM decides rolling is even necessary.

Once the character has enough fuel and a proper place to build his fire, he has to light it. If he has appropriate equipment — flint and steel, matches, or the like — this probably doesn't even require a roll in normal conditions. He must make a roll if he lacks the appropriate equipment and has to make firestarting tools (such as a firebow). The Firestarting Table lists modifiers for various firestarting methods, and modifiers for other possible conditions that may force a character to make a roll to start a fire.

SHELTER

In addition to dealing with recurring needs such as food and water, characters in wilderness areas have to find or build shelter from the elements. Otherwise they risk the effects of exposure, which can sometimes be fatal.

Finding Shelter

The easiest way to obtain shelter is to find it. Naturally-occurring forms of shelter include caves, hollow trees/logs, and the like. The Finding Shelter Table lists the modifiers for finding appropriate shelter based on the type of environment; the more severe the environment, the harder it is to find shelter.

FINDING SHELTER TABLE

Type Of Environment	Climatic Zone: Arctic	Temperate/Subtropical	Tropical
Coast	-4	-2	-1
Desert*, sand dune	—	—	-6
Desert, scrub or salt marsh	—	—	-4
Forest	-3	-1	-1
Marine	-5	-5	-5
Mountains	-4	-2	-2
Plains	-4	-3	-3
Swamp/Marsh	—	-2	-2
Urban	+3	+3	+3

*: Deserts have only one modifier, since they're effectively a climatic zone of their own; this is listed under "Tropical" for convenience.

Building Shelter

If a character can't find shelter, he may have to build one. This includes things like digging snow caves, making crude lean-tos with branches, building simple treehouses, and so forth. The Building Shelter Table lists the modifiers for building shelter, based primarily on the availability of appropriate materials or the like. If the character has useful tools (hammer and nails, a shovel, and so forth), the GM may add positive modifiers of +1 or more as well and decrease the time needed.

BUILDING SHELTER TABLE

Type Of Environment	Climatic Zone: Arctic	Temperate/Subtropical	Tropical
Coast	-4	-2	-1
Desert*, sand dune	—	—	-5
Desert, scrub or salt marsh	—	—	-4
Forest	+2	+3	+3
Marine	-5	-5	-5
Mountains	-3	-3	-3
Plains	-2	-1	-1
Swamp/Marsh	—	+2	+2
Urban	+3	+3	+3

*: Deserts have only one modifier, since they're effectively a climatic zone of their own; this is listed under "Tropical" for convenience.

ANIMALS AND SURVIVAL

Animals often have the *Survival* Skill for their native environment. This represents an animal's general ability to keep itself alive and healthy in the wild (the animal's AK of its home territory often acts as a Complementary Skill). As such, it's an Everycreature Skill, so GMs may wish to remove it from the Everycreature Skill list for animals that are so domesticated (like some breeds of cattle) that they could not survive on their own in the wild. Most animals only have one environment they know how to survive in. But some animals, such as birds, migrate over vast distances, and so must buy additional environments for their Survival.

WEATHER PREDICTION

Characters with Survival know a little bit about predicting the weather, since the weather usually has a significant impact on the ability to survive. A character can make a Survival roll at -0 to get a general idea of what the weather will be like over the next 6 Hours. He can make a roll at -1 to predict the weather for the next day; each succeeding day imposes another -1 to the roll. If the character has a more relevant Skill, such as PS: Weather Prediction, he can use Survival as a Complementary Roll for that Skill instead.

PROTECTING ONE'S SELF

Wilderness regions hold many dangers, and knowing how to protect one's self from them is one of the most important parts of Survival. Therefore, GMs may want to give characters with Survival a greater chance to avoid wilderness perils. A Survival roll, perhaps at an appropriate penalty, tells the character what the prominent local dangers are, and some ways to protect himself from them. For example, a ranger exploring the Chekuru Jungle might know that the chief dangers it holds are the fire-fever (a deadly disease of unknown origin) and the fierce jungle leopard. He also knows that keeping a smoky fire burning at night helps to stave off fire-fever, and that the fire also tends to scare away the nocturnal leopard — thus giving him an edge over someone who doesn't have Survival.

Disease

If a character makes an unmodified Survival roll for an environment he has as a category or subcategory, he knows the diseases prominent in that environment, and if appropriate how to avoid them or protect himself against them. For example, he might know that walking barefoot in certain areas is likely to expose him to foot parasites, or that a specific type of fruit tends to cause stomach cramps. He may even know preventative measures to take, such as treating bug bites with the juice of a particular leaf to prevent infection. If appropriate, Paramedics may serve as a Complementary Skill (or vice-versa).

Environmental Effects

Exposure to the environment may cause all sorts of problems and maladies, ranging from annoying (but harmless) insect bites to potentially fatal conditions such as heat stroke and hypothermia. Characters with Survival know the best ways to avoid these difficulties; the Environmental Effects Table lists possible conditions and modifiers. However, knowing that may not help them avoid the condition; staving off heat stroke is difficult without water, as is preventing hypothermia without adequate clothing and shelter.

Other Dangers

A character can make Survival rolls (usually unmodified) to determine the best way to cope with other dangerous situations, such as quicksand (see *Fantasy Hero,* page 358, or *Pulp Hero,* page 366), sandstorms, snowblindness, or encounters with wild animals. He may even know preventative measures to take, such as how to treat the bites of venomous animals. Paramedics may serve as a Complementary Skill (or vice-versa).

TRAVELING THROUGH THE WILDERNESS

Characters who have to use Survival usually find themselves in a situation where they have to travel — to cross rough terrain to reach safety or their intended destination. An unmodified Survival roll tells a character the safest way to traverse the ground — how best to walk uphill and downhill, how to spread one's weight to

ENVIRONMENTAL EFFECTS

Condition	Modifier	Notes; Ways To Prevent
Frostbite	-1	See page 438 of the rulebook. Keep extremities and skin covered and warm.
Heat Cramps	-2	Severe muscle cramps and pain caused by salt loss from excess sweating (-2 on all physical Characteristic Rolls). Character should stop activity, get into the shade, and drink water. See also page 438 of the rulebook regarding dehydration.
Heat Exhaustion	-3	Headache, dizziness, confusion, weakness, and related symptoms caused by lack of water and salt (-4 on all physical Characteristic Rolls). Character should stop all activity, lie down in the shade, be sprinkled with water, and drink small amounts of water periodically until he feels better. See also page 438 of the rulebook regarding dehydration.
Heat Stroke	-4	Severe heat injury from extreme loss of water and salt; may cause nausea, vomiting, and even death. See page 438 of the rulebook regarding dehydration.
Hypothermia	-3	Lowering of body temperature due to exposure; can be fatal. Character should have his entire body rewarmed in a warm bath if possible. See page 438 of the rulebook regarding frostbite.
Insect Bites	-0	Usually harmless but annoying, but could be fatal if insects are venomous (or carry diseases) or the bites become infected. Characters can often keep insects away by smearing their bodies with mud, certain plant juices, or like substances, or with lots of smoke.
Sunburn	-1	See page 439 of the rulebook

ENVIRONMENTAL COMPATABILITY: ENVIRONMENT TO ENVIRONMENT

Environment	Arctic/ Subarctic	Mountains	Temperate/ Subtropical	Tropical	Deserts	Marine	Urban
Arctic/Subarctic	—	-3	-5	-6	-8	-5	-7
Mountains	-3	—	-4	-4	-4	N/A	-5
Temperate/Subtropical	-5	-4	—	-2	-5	-5	-3
Tropical	-6	-4	-2	—	-6	-5	-4
Deserts	-8	-4	-5	-6	—	N/A	-6
Marine	-5	N/A	-5	-5	N/A	—	-6
Urban	-7	-5	-3	-4	-6	-6	—

—: same environment

N/A: Character cannot use his Survival in this environment at all, unless the GM rules otherwise.

The "Environment" column lists the Survival category(ies) a character has. The other columns list a penalty for using his Survival in other types of environments. If a character only has a subcategory (such as Temperate/Subtropical Forests) then he can only use his Survival in other environments of the same type (such as Arctic/Subarctic Forests or Tropical Forests, but not Tropical Plains or Arctic/Subarctic Coasts).

avoid breaking through ice, and so forth. A character who fails this roll may take longer to cross rough ground (or use up more Long-Term END while doing so), or may run a greater risk of injury. The GM determines the results of failure, but increasing travel time or Long-Term END expenditure by 10% per point the roll failed by is a good rule of thumb.

Survival does not tell a character how to find or follow directions in the wilderness; that requires Navigation (Land). Survival just helps a character avoid or survive the perils of the journey once a successful Navigation roll tells him which way to go. Nor does Survival help characters climb things; that requires Climbing.

Crossing Water

Characters traveling in the wilderness often have to cross rivers, streams, lakes, swamps, and other bodies of water. A character whose *Survival* Skill covers the environment he's in may make an unmodified roll to determine the safest and/or easiest way to cross a body of water, or to make tools to help in the process (such as log rafts or "water wings" made from a pair of pants). Note that this does not mean crossing the water is necessarily safe and/or easy — just that the character has made it as safe and/or easy as reasonably possible. Failing the roll may mean the character exposes himself to dangers (twisted ankles, deep pools, being swept away by an unexpectedly fast current) that he would otherwise have avoided. The GM determines what dangers (if any) exist, and their effects.

CROSS-ENVIRONMENT COMPATABILITY

Although characters have to buy Survival by environment categories, it stands to reason that some aspects of the Skill may carry over from one region or climatic zone to another with little or no loss of effectiveness. At the GM's option a character's not having a particular environment category may not prevent him from using Survival — he can use it either normally or at a penalty, depending upon the types of environments he knows how to survive in and the tasks involved.

The GM has the final say as to how compatible two environments are, based on common sense, dramatic sense, game balance, and other factors. For example, despite the fact that the rules treat Mountains as a single category, mountainous areas can vary significantly. In some cases they're cold, harsh, unforgiving, rocky places similar to Arctic/Subarctic zones (particularly above the treeline); in others they're smaller and subject to the general conditions of the region they're in (Temperate/Subtropical, Desert, Tropical, or what have you). Based on his knowledge of the game setting, the GM can determine just how compatible two regions are in terms of characters using Survival.

The two accompanying tables list suggested modifiers based on the type of environment and the tasks attempted. If a character suffers a penalty for environment compatability and one for the type of task he's attempting, those penalties add together

ENVIRONMENTAL COMPATABILITY: TASKS

Type Of Task	Penalty For Using In Other Environment
Food	
Foraging	-4
Hunting/Trapping/Fishing	-4
Food Preparation	-2
Water	
Finding Water	-3
Making Water Drinkable	-1
Fire	
Finding Fuel	-2
Starting A Fire	-2
Shelter	
Finding Shelter	-2
Building Shelter	-3
Weather Prediction	-4
Protection	
Disease	-4
Environmental Effects	-3
Other Dangers	GM's discretion
Traveling	
Crossing Water	-3



BASE TIMES FOR SURVIVAL

Type Of Task	Base Time
Food	
Foraging	1 Hour (see text)
Hunting/Trapping/Fishing	3-6 Hours (see text)
Food Preparation	20 Minutes to 1 Hour
Water	
Finding Water	1 Hour
Making Water Drinkable	20 Minutes to 1 Hour
Fire	
Finding Fuel	1 Minute to 1 Hour
Starting A Fire	1 to 5 Minutes
Shelter	
Finding Shelter	20 Minutes to 6 Hours
Building Shelter	1d6 Hours (see text)
Weather Prediction	1 Turn
Protection	
Disease	1 Turn to 5 Minutes
Environmental Effects	1 Turn to 5 Minutes
Other Dangers	GM's discretion
Traveling	
Crossing Water	1-20 Minutes

(but the maximum possible total penalty is -9). And of course he may suffer one or more of the penalties described in the sections above.

EQUIPMENT

As noted above, Survival rolls are usually necessary only when a character lacks appropriate survival gear; the Skill largely involves keeping one's self alive and healthy *without* the proper equipment. However, in some instances GMs may wish to treat the availability of equipment as a positive modifier for Survival rolls. Some types of Survival equipment include: environment- or weather-specific clothing; tools; tents; sleeping bags/bedrolls; hunting and fishing equipment; water purification tablets; tinderboxes (or other firestarting equipment); and camp cooking gear.

POWERS AND SURVIVAL

Characters with Life Support can often resist the effects of wilderness environments without any difficulty. Characters with powers of appropriate special effects may be able to use them to stave off environmental dangers; for example, a character with fire powers could perhaps keep his comrades warm for a while, and one with ice powers could be everyone's best friend in the desert. Telekinesis may substitute for a wide variety of tools, such as hammers or fishing gear, and thus make using Survival easier (or unnecessary).

CONSEQUENCES OF FAILURE

The text above describes some of the specific consequences of failing Survival rolls. In general, failing a Survival roll means the character could not find food or water, obtain shelter, or shield himself from the effects of the environment he's in. One or two failures may simply be inconvenient, but repeated failures often imperil a character's life... and in harsh environments, even a single failure could be fatal. Failing any

Survival roll badly (by 4 or more) could expose the character to additional dangers or inconveniences (twisting an ankle, falling off a cliff or into quicksand, disturbing a ferocious predator, thinking a poisonous fruit is safe to eat...).

BASE TIMES

The accompanying table lists suggested Base Times for various Survival tasks. In many cases this means time the characters can't spend traveling or doing other things, so highly-skilled survivalists may try to cut the time down by accepting a penalty to the roll (see page 35).

UNIFYING/SUBDIVIDING SURVIVAL

In cinematic campaigns, such as some *Pulp Hero* and High Fantasy games, subdividing Survival into environments may be pointless or counterproductive. In that case, characters can simply buy Survival as a standard Intellect Skill (*i.e.,* it costs 3 Character Points for an INT-Based Roll) and use it in any environment for any type of Survival-related task.

On the other hand, in games where characters spend a lot of time in the wilderness and their ability to survive and function there is a key element/theme of the campaign, GMs may want even greater differentiation in Survival. Instead of allowing characters to buy Survival by categories, they can only buy subcategories for 1 Character Point apiece (or possibly 2 Character Points each; categories that have no subcategories count as a "subcategory" themselves for these purposes). That way a character who knows about Temperate/Subtropical Plains doesn't know a thing about Temperate/Subtropical Forests — he has to buy each subcategory separately.

Additionally, the GM might think about subdividing Mountains and Urban, the two categories that have no subdivisions. Mountains could have climatic categories (Arctic/Subarctic Mountains, Temperate/Subtropical Mountains, Tropical Mountains, and Desert Mountains), while Urban would be divided based on the size of the urban environment (Village, Town, City, Metropolis).

The GM could reorganize Survival so that it subdivides by *task category,* rather than environment. That would mean characters could perform a given task in any environment, but might have no ability at all to perform other tasks. The categories and subcategories would be those listed in the Base Times Table.

Seven Survival Skills

For games seeking extremely precise definitions of Skills, you can convert Survival into seven distinct Skills — the seven major divisions listed on the Base Times Table. As separate Skills, they'd be called Find/Prepare Food, Find/Prepare Water, Firestarting, Find/Build Shelter, Weather Prediction, Wilderness Protection, and Wilderness Travel. Typically each would be treated as a standard Intellect Skill, but if the GM prefers each one might cost only 2 Character Points, or would be bought by subcategories costing 1 Character Point each.

SURVIVAL BY GENRE

Survival works the same in all genres. It's not particularly common in some genres (such as Cyberpunk), but functions the same regardless.

Cyberpunk/Near Future

Most Cyberpunk campaigns take place entirely in urban areas. If characters buy Survival at all, they usually only buy it for the Urban environment.

Fantasy

In Fantasy games featuring a lot of dungeon-delving and exploration of "lands" below the surface, characters can take *Underground* as a 2-point environment category for Survival. A character with Survival (Underground) knows how to make and use crude light sources, what sort of dangers caves and caverns hold, where to find water and food underground, which types of cave-fungus are edible, and so forth.

Pulp

Few Skills are as useful to globetrotting adventurers as this one. In campaigns based primarily around exploration, treasure-hunting, and the like, the GM might even want to consider making Survival a sort of "Everyadventurer Skill" so all the PCs have at least an 8- in one environment. In any event, the cinematic nature of Pulp usually means you don't need to use the detailed rules in this section; one or two rolls should suffice to meet all of a character's survival needs in most circumstances.

Science Fiction

In Space Opera-style campaigns, planetary environments are broadly similar, so an expert in Mountain Survival on Earth can get along in high-altitude regions on other Earthlike worlds with only a -1 penalty. In Hard SF and other realistic settings, each planet's environments are distinct, so that Survival: Earth Deserts and Survival: Martian Deserts are separate Skills. In such campaigns, characters must specify the planet where they learned Survival.

Gamemasters may also wish to take into account the relative degree of similarity between planets. Even among worlds classifiable as "Earthlike," a great deal of variation can occur. See the accompanying table for suggested modifiers; these modifiers are in addition to the -1 penalty described above, if that's used.

Of course, no amount of skill can overcome the absolute limits imposed by the environment. A character on Mercury can't find water using Survival because there simply isn't any water to find.

PLANETARY SIMILARITY TABLE

Degree Of Similarity	Survival Roll Penalty
Very similar	-0
Mostly similar	-1
A little similar	-2
Mostly different	-3
Very different	-4
Extremely different	-5

SYSTEMS OPERATION

Type: Intellect Skill (roll: 9 + (INT/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

Characters with this Intellect Skill understand how to operate sensors, communications devices, and similar types of equipment properly. This includes radios, radar systems, starship life support systems, sonar, electronic countermeasures (ECM), medical diagnostic technology, certain advanced weapons systems (such as missile batteries or satellite-based weapons), and the like. They can identify this type of equipment (by its function and operation, if not by brand name or the like), figure out how to operate devices they haven't used before, determine which device works best for a particular task, and so on.

Systems Operation And Other Skills

Systems Operation does not apply to navigational equipment (which is covered by Navigation), nor does it allow a character to encode/decode transmissions (that requires Cryptography) unless that function is built into the device in question. However, it lets characters send or intercept navigational or encrypted data, and in some cases (such as the use of advanced GPS devices or ILS [instrument landing systems]), Systems Operation may serve as a Complementary Skill.

Modern (late twentieth/early twenty-first century) and later communications and sensory systems depend so strongly on computers that Computer Programming may often serve as a Complementary Skill for Systems Operation tasks. In other cases, Computer Programming may help indirectly, such as by allowing a character to "hack" into phone company systems to get access to records needed to easily trace calls.

Using Systems Operation

Generally speaking, Systems Operation has four main uses: operating sensory, communications, and similar types of equipment; identifying unusual equipment and determining how to operate it; building, repairing, and maintaining sensory and communications equipment; and electronic warfare.

OPERATING EQUIPMENT

First and foremost, characters use Systems Operation to operate the types of equipment described below (primarily, but not exclusively, sensory and communications devices). This includes:

- activating the device
- tuning the device to the proper frequency, communications band, or the like
- send and receive transmissions, sensor pulses, and the like
- overseeing the functioning of the device as it operates

See the descriptions of specific types of equipment, below, for more information.

In most situations — where a character's under no pressure and the circumstances don't present any difficulties — there's usually no need to make a Systems Operation roll; the GM can just assume the character succeeds. But if problems arise, including anything that imposes a penalty on the Skill, the character needs to make a Skill Roll. If the roll succeeds, he uses the equipment properly. If it fails, he can't work the device correctly, interference causes him to lose the signal, the device can't obtain the information he wants, or the like; if it fails badly he may misinterpret the information he receives or damage his equipment. (See below for more specific uses and results.)

In the case of particulary complex devices, the GM may require a character to make multiple Systems Operations rolls — one to activate the device, one to tune or calibrate it properly, one to actually use it, and so on.

UNFAMILIAR DEVICES

A character with Systems Operation who encounters a strange device can use the Skill to determine (a) what sort of device it is, (b) if Systems Operation applies to it, and (c) if so, how to operate it.

Identifying the device has a minimum Base Time of 1 Turn (possibly longer for large or complex devices) and usually requires an unmodified Skill Roll. You can use the rules for Analyze Technology to determine the results, and that Skill functions as a Complementary Skill (or vice-versa, depending on which Skill the GM considers most relevant). For particularly complex, strange, or alien devices, the GM might impose a -1 or greater penalty (see page 32). A successful roll identifies the device (possibly including its function). A failed roll means the character doesn't know what the device is or how it works; a badly failed roll (by 4 or more) means he mistakenly identifies the device.

If the character successfully identifies the device, he also knows whether it's a type of device Systems Operation works with. If it is, he typically knows how to operate it as well, though the GM may require him to make another roll for this (see *Operating Equipment,* above). In that case, the same penalty for complexity or strangeness may apply.

BUILDING, REPAIRING, AND MAINTAINING EQUIPMENT

Characters with Systems Operation generally know how to build, repair, and maintain the types of equipment the Skill applies to. Depending on the type of equipment, Electronics, Mechanics, Computer Programming, or some other Technological Skill may be Complementary. Building a device usually has a Base Time of 1 Hour or more; repairing or maintaining one tends to take less time, but it depends on the extent of the damage, size and complexity of the device, and other factors. Penalties for damage to the subject may apply, and for building devices the GM may impose a penalty of -1 per 10 Active Points in the device. For modifications to a device, use the Electronics rules (page 177).

A successful build/repair roll means the character's accomplished what he set out to do. A failed roll means he can't build the device or effect repairs, though he can try again subject to the standard rules for additional attempts. A badly failed roll (by 4 or more) means he's irreparably broken the device, hurt himself, or suffered some other negative consequence.

ELECTRONIC WARFARE

Characters use Systems Operation to engage in *electronic warfare* (EW) — the use of communications and sensors to disrupt enemy operations, enhance the power of one's own military force, and the like. This includes jamming (or unjamming) sensors and communications systems, engaging electronic countermeasures (ECM) and electronic counter-countermeasures (ECCM), ESM (electronic surveillance measures; see below), and so forth.

Hundreds of volumes have been written on the subject of EW; it's a complex subject whose details are beyond the scope of this book. In most gaming campaigns it boils down to a Systems Operation Versus Systems Operation Skill Contest pitting two characters against one another. To add some dramatic tension, the GM may require a series of Contests, each one representing one stage of the battle and with victory providing a +1 bonus for the remaining rolls in the Contest. For campaigns where EW is a prominent part of game play, GMs can easily devise more advanced rules, possibly including "EW Maneuvers" similar to Martial Arts.

GENERAL MODIFIERS

Several circumstances can modify many types of Systems Operations rolls (usually those pertaining to Communications Systems and Sensor Systems, but sometimes they affect rolls with other types of equipment as well). First, the weather and related atmospheric/environmental conditions (such as sunspots or solar flares) may make it difficult to send/receive transmissions or to use sensors. Weather tends to affect earlier forms of Systems Operation technology more strongly than later systems; communications and sensory devices of the early twenty-first century have much greater capacity to resist weather interference than similar devices from the mid-late twentieth century, for example.

Similarly, the positioning of the equipment may affect how well it works — putting a radio tower on a promontory tends to work well, while putting it in a valley may degrade its ability to send and receive clearly. Positioning modifiers may also account for obstructions that could block systems like radar and sonar.

SYSTEMS OPERATION MODIFIERS

General Circumstances	Modifier
Weather/atmospheric conditions*	
Very Good	+2
Good	+1
Average	+0
Poor	-2
Very Poor	-4
Positioning	
Very Good	+2
Good	+1
Average	+0
Poor	-2
Very Poor	-4
Communications Systems	**Modifier**
Strength of signal (see text)	
Very Weak	-4
Weak	-2
Average	+0
Strong	+1
Very Strong	+2
Eavesdropping on signals (see text)	
Well Known	+2
Known	+1 to +0
Unknown	+0 to -1
Sensor Systems	**Modifier**
Sought substance/phenomenon is	
Very Weak/Barely Present	-4
Weak/Present In Small Amounts	-2
Average/Present in Average Amounts	+0
Strong/Present in Large Amounts	+1
Very Strong/Present in Enormous Amounts	+2 or more

*: You can use weather/atmospheric conditions penalties to represent any other sort of interference (such as that caused to sonar by temperature differentials in the water).

Depending on the genre and the situation, the GM may rule that other phenomena cause interference that penalizes Systems Operation (or, more rarely, strengthens a signal). For example, in some Science Fiction settings, characters sometimes encounter mineral formations that block or degrade transmissions, magnetic/stellar/cosmic energy fields that affect communications and sensor systems, and so on.

TYPES OF SYSTEMS

The number and variety of systems that Systems Operation can apply to is practically limitless, especially in Modern- and Future-era campaigns. Broadly speaking, this equipment falls into six categories: Communications Systems; Computer Systems; Environmental Systems; Medical Systems; Sensor Systems; and Weapons System.

Communications Systems

One of the main types of equipment Systems Operation applies to is *communications systems* — devices used to communicate either one-way (such as television or commercial radio) or two-way (such as telephones and walkie-talkies). They include:

- Cellular and digital telephones
- Radio
- Satellite communications
- Telegraph (see *Western/Victorian,* below)
- Telephone (traditional)
- Television
- Fictional versions of these technologies, such as "hyper-radio" in a Science Fiction campaign

Some of the tasks characters perform with these devices include: receiving and broadcasting transmissions; overcoming interference; locating and improving transmissions; eavesdropping on transmissions; tracing transmissions; and interrupting, disrupting, and jamming transmissions.

RECEIVING AND BROADCASTING

The most basic use of communications systems is to broadcast and receive transmissions. (Of course, some devices, like a standard television, can only receive.) Usually this doesn't require a roll at all, but if the conditions (weather, positioning, other forms of interference...) make it difficult to send or receive, the GM may require the character to succeed with a roll to get his message through. Failure means the transmission isn't sent or received properly (it can't get through, or it's too broken up or garbled to be understood if it does); a bad failure (by 4 or more) means the *wrong* message is received.

OVERCOMING INTERFERENCE

Instead of tolerating the sorts of interference mentioned above, a character can make a Systems Operation roll to try to overcome them by clearing up or strengthening his signal. He makes a Systems Operation roll subject to interference modifiers and the like. This task has a Base Time of 1 Minute. If he succeeds, that roll functions as a Complementary Skill Roll for his roll to receive/send the transmission properly. If he fails, he gets no benefit; if he fails badly (by 4 or more) he suffers a -2 penalty on his receive/send roll.

IMPROVING TRANSMISSIONS

Sometimes a character using communications equipment receives a faint or difficult to locate signal — one for which he has to make a PER Roll at a substantial penalty to try to understand. He can use Systems Operation to focus in on the signal and improve his reception of it as much as possible so he can perceive it clearly. This most often applies when a signal comes from so far away (or from such weak broadcasting equipment) that it just barely reaches the character. The "strength of signal" modifier listed in the Systems Operation Modifier table applies; it takes the place of modifiers for interference and the like in most cases. For situations involving routine interference you can use just the interference modifiers.

This task has a Base Time of 1 Minute and requires a Systems Operation roll. If the roll succeeds, the character has located the signal and can receive it clearly enough to understand it — in game terms, he suffers no penalty to his PER Roll to hear or see the transmission. If he fails, he can't improve it and suffers whatever PER Roll penalty the GM sees fit to impose; if it fails badly, he loses the signal entirely, misunderstands the message, or suffers an additional -2 penalty to the PER Roll.

EAVESDROPPING ON TRANSMISSIONS

A character can use Systems Operation to locate a particular channel or frequency and "eavesdrop" on it, receiving the transmissions without anyone involved knowing he's doing so. This is easily done with well-known channels and frequencies (see below), but much harder to do with transmissions on secret or protected channels (such as military broadcasts, a supervillain team's private radio channel, and the like). This requires a minimum Base Time of 1 Turn (often longer) and a Systems Operation roll. If the roll succeeds, the character's found what he's looking for. If it fails he hasn't; if it fails badly (by 4 or more) he finds some other signal that he mistakes for the one he wants.

For eavesdropping purposes, signals come in three varieties: Well-Known (generated by one's self and one's allies); Known (generated by enemies or neutral parties); and Unknown (never before encountered or identified) (see the Systems Operations Modifiers table for modifiers). Characters can only eavesdrop on transmissions made "in the open." If a transmission uses a dedicated line (such as a cable television line, telephone line, or telegraph line), the character can only listen in by tapping into the cable. This usually requires Bugging (described earlier in this chapter); placing phone taps and the like is not a function of Systems Operation.

Of course, just because a character can eavesdrop on a signal doesn't mean he can understand it. Many signals are encrypted or concealed with steganography (thus requiring Cryptography, and probably a lot of time, to "crack"), and sometimes the people the character's listening to use a language he doesn't speak.

TRACING TRANSMISSIONS

In some cases, characters with the proper equipment can use Systems Operation to "trace" a transmission and determine the physical location it's coming from. This typically requries access to three or more receivers (such as three cell phone relay towers) that the character can use them to triangulate the position from which a broadcast is coming by analyzing the "time difference of arrival" (*i.e.,* how long it takes the signal to reach each of the receivers). In some situations a character may be able to tap into a communications network (like the telephone company) and access its lines. Without that, the character suffers substantial penalties to his roll (-3 or more).

Tracing a transmission has a Base Time of 1 Turn to 1 Minute and requires a Systems Operation roll. If the roll succeeds, the character learns the location the transmission's coming from. Depending the type of technology involved and how well he made the roll, this could be a general location ("somewhere between First and Fifth Streets") or could be as precise as a GPS-supplied latitude and longitude reading. In general, the more the roll succeeds by, the more precisely the character can pinpoint the location. If the roll fails, he can't locate it; if it fails badly (by 4 or more), he identifies the signal as coming from the wrong location.

INTERRUPTING, DISRUPTING, AND JAMMING TRANSMISSIONS

Systems Operation allows characters to interrupt transmissions (such as a supervillain breaking into broadcast television to announce his latest scheme for world domination) and jam or disrupt transmissions so others cannot receive them (or can't receive them clearly). This qualifies as a form of electronic warfare (see above) and should be handled as such.

TYPES OF COMMUNICATIONS SYSTEMS

The type of communications system a character works with can affect what he can do with Systems Operation and how easy it is to do. Some common types of systems include:

Cellular And Digital Phones

Cellular and digital phones are a common form of communication in many modern societies beginning in the mid-to-late 1980s. Assuming a character has the proper equipment, he can do several things with them.

First, he can intercept, eavesdrop on, or disrupt cellular communications, as discussed above. Second, in some cases he can identify the person to whom a particular cell phone belongs. He can't do this just by intercepting the signal (unless the user happens to reveal his identity through things he says while using the phone) — he has to access the records of the seller or service provider. This typically requires Computer Programming to "hack" into sales, ownership, and usage records and thus determine who bought the phone with the electronic serial number (ESN) in question. If the phone is the "disposable" type with a limited amount of prepaid air time, identifying its purchaser/owner/user may be impossible. Some prepaid phones, particularly outside the United States, use GSM chips that can be transferred from one phone to another. These also have identity signals and thus can still be identified even if the original phone is disposed of — it's the chip itself that matters, not the phone it's plugged into. Some later-model phones also have built-in GPS technology a character can access to pinpoint the phone precisely.

Third, if he knows a phone's ESN or GSM signal, he can track a cell phone user by triangulating via the nearby cell phone signal relay towers. A cell phone that's turned on periodically connects with two to five cellular towers to make sure it can obtain the strongest signal and fastest response



time; this occurs even if the phone's not actively in use. Three towers are needed for a proper triangulation, but even one tower allows a character to follow the approximate path a cell phone takes as its user travels. Cell phone companies' systems record which towers a phone uses to make calls at given times, but do not record which towers a phone passively connects with when turned on but not in use. Of course, if a phone is turned off or has no battery, it's not connected to any relay towers at all and cannot be traced.

Pagers

Most modern pagers connect with cellular towers passively, as described above for cell phones, and as such can be traced if a character knows the pager's ESN. However, they don't necessarily connect as often as cell phones; a connection may occur as infrequently as once an hour or less. Some model pagers do not passively connect at all, making them effectively impossible to trace unless actively in use (but this often increases the time it takes for the user to receive a page).

Radio

Radio devices — whether the kind in a car stereo that can only receive, or models that both receive and transmit — use the *radio spectrum,* a section of the electromagnetic spectrum, to send and/or transmit communications. The radio spectrum ranges from about just a few cycles, to thousands of cycles (kilohertz), to 300 gigacycles (gigahertz). It's divided into the following "bands," from lowest to highest:

■ ELF (extremely low frequency): The band from about 3-30 cycles is used to transmit signals to submerged submarines because those frequencies penetrate water well. However, the low frequency means messages take longer than normal to send, so they're usually restricted to short phrases and/or codes.

■ VLF (very low frequency): From about 6,000 cycles (6 kilocycles, or kilohertz) to 30 kc. It's used primarily for maritime communication and navigation signals.

■ LF (low frequency): From 30-300 kc. Also used primarily for maritime communication and navigation signals.

■ MF (medium frequency): From 300 kc to 3 megacycles. AM broadcasting uses this band.

■ HF (high frequency): From 3-30 mc. Ham radios, CB radios, law enforcement radios, international shortwave broadcasts, most alarm systems, garage door openers, most cordless phones, walkie-talkies, baby monitors, and radio-controlled (RC) toys use this band (some versions of some of these technologies use the VHF band instead).

■ VHF (very high frequency): From 30-300 mc. Most bugs (listening devices) use the VHF band, as does FM radio and most television stations. For example, FM radio is assigned the band of frequencies between 88 and 108 MHz (megahertz, or millions of cycles per second).

■ UHF (ultrahigh frequency): From 300 mc to 3 gigacycles. UHF television broadcasters, police repeaters, and cell phones use this band.

■ SHF (superhigh frequency): From 3-30 gc. This is a microwave band used for various high-end communications and navigation purposes, satellite transmissions, the GPS system, and the like.

■ EHF (extremely high frequency): From 30-300 gc, approaching the realm of infrared light.

Lower frequency radio waves are "ground waves," meaning they follow the curvature of the Earth and so tend to have limited range (though shortwave signals, such as in ham radio, can go all around the world). However, they can bounce off the "Heaviside layer" in the ionosphere ("skywave") and thus travel further, especially at night (the season and sunspot activity also affect how far a radio transmission can travel). In the upper bands used with satellite transmissions and the like, a radio broadcast can reach anywhere in the world.

The exact range of any given radio depends on its power, the size of its antenna, and other factors. As a rule of thumb, assume a handheld unit (a walkie-talkie, for example) has a range of about 2-4 km, a backpack radio unit a range of 40-60 km, and a vehicle mounted radio a range of 300-500 km. At the GM's option, a character can make a Systems Operation roll to extend this range — +10% range for every point by which the roll succeeds. If the roll fails, the character gets no range bonus; if it fails badly (by 4 or more) reduce the range by 10% per point of failure. (These range rules apply primarily in more "realistic" campaigns; in cinematic campaigns radios may have much longer ranges depending on the needs of the story.)

Receiving and broadcasting using radio devices is usually pretty easy; after all they're meant for more or less public access in many ways. Intercepting, jamming, or tracking a radio signal may sometimes be difficult for this reason; the GM may impose modifiers of -1 or more.

Satellite Communications

Since the first ones were launched in the late 1950s, satellites have become an increasingly important part of modern communications. They allow for rapid transmission of news around the world, precise tracking of vehicles and people, measurements of the weather and other phenomena, and the relaying of all sorts of communications signals. Communications satellites parked in geosynchronous orbit (22,223 miles above the Earth so they remain in a fixed position relative to the ground) essentially function as large radio frequency receiver/transmitters with a global range (though millisecond-length delays may result from the distances involved).

Using Systems Operation to work with satellite communications is more or less the same as working with standard radio communications, but with greater range and potentially many more signals to search through and filter out to find the one the character wants. The GM may impose a -2 (or greater) penalty to account for this.

Telephone

Systems Operation does not include the ability to plant wiretaps in phones or the like — that's covered by Bugging (*q.v.*). However, characters with the proper equipment can use Systems Operation to trace phone calls. Given access to phone company systems that record the number dialed from, dialed to, and the time, tracing a call can require as little as a Full Phase, though 1 Turn may be more accurate in many instances. A character without such access has to use Computer Programming and the like to

Television

Television involves broadcasting audio and video transmissions using some of the upper-end radio spectrum frequencies. Some TVs can also receive signals from cable or satellites. Interfering with, disrupting, or eavesdropping on these signals is similar to doing the same things with radio or satellite transmissions.

Computer Systems

While characters primarily use Computer Programming to work with computers, they can also use Systems Operation to indicate their knowledge of broad computer systems such as mainframes, the Internet, the Cybernet (in Cyberpunk campaigns), computer networks, and the like. In this respect Systems Operation typically serves as a Complementary Skill to Computer Programming, but when the task at hand involves sending or receiving data using computers the GM might reverse that relationship.

Environmental Systems

In everyday life on Earth, characters rarely (if ever) have to worry about making Skill Rolls to keep the air conditioning and heating running smoothly. But when they venture out into hostile environments on starships and submarines or live in undersea domed communities their lives depend on keeping life support and other environmental systems functioning smoothly and properly. Systems Operation is the Skill that lets them do that.

Under ordinary circumstances, building, maintaining, repairing, and using environmental systems doesn't require Skill Rolls... but adventures often feature circumstances that aren't so ordinary. When necessary, the GM should have a character make a Systems Operation roll to keep the life support functioning long enough for his starship to make it to safety, to "lock it out" so invaders can't take control of it themselves (a form of electronic warfare, essentially), "stretch out" the available breathing gases so the crew can survive long enough to reach a source of resupply, and so forth.Typically this roll is unmodified and has a Base Time of 1 Turn, though some tasks may only take a Full Phase (and major repairs or the like could take hours). Success means the character achieves his goals, failure that he does not (but can try again subject to the usual rules for doing so), and a bad failure (by 4 or more) that he makes the situation worse.

Medical Systems

Characters who know how to work with radios and sensors aren't doctors. But as of the mid-to-late twentieth century and beyond, many types of medical equipment — CT scanners, CAT scanners, x-ray machines, MRI scanners, laser surgery devices, and many more — are so complex that they fall under the rubric of Systems Operation. (With the GM's permission characters could buy PS: Use Medical Devices instead to represent the ability to use medical machines but not communications or sensory devices.)

The Base Time required to use a medical system varies, but is usually 1 Minute (and possibly much longer). Skill Rolls aren't required for routine use, but may be if difficulties arise or there are problems with the subject. In that case success indicates the device functioned as intended and obtained the information sought. Failure means the device didn't work properly or gave an invalid reading for some reason; bad failure (by 4 or more) that the character obtains incorrect information, possibly leading to serious medical complications for the patient.

Sensor Systems

Besides communication systems, the devices characters most often use Systems Operation with are sensor systems — devices intended to detect and/or record the presence of certain objects or phenomena. While humans have long used devices that enhanced existing senses (such as telescopes), machines that can perceive and record phenomena humans cannot (such as radio waves, gamma rays, or the presence of questionite) are a relatively recent development.

The primary uses of Systems Operation with sensors include: properly sensing something; making a valid recording of things sensed; analyzing recordings of sensed data; and disrupting or jamming enemy sensor systems.

SENSING THINGS

First and foremost, characters use Systems Operation to operate a sensor properly and obtain the data sought (whether that data is "what we're looking for is here" or "what we're looking for is not here"). In ordinary situations this doesn't require any Skill Roll. If the substance or phenomenon sought is only present in minor amounts, or some other situation imposes a penalty, then the GM should call for a roll. (If appropriate, the character may be able to use the "overcoming interference" rules for communications systems with sensors to obtain better results by strengthening the "search pulse," broadening the "search wave," overcoming the effects of materials that block sensors, or the like.)

If the roll succeeds, the character operates the sensor properly. His roll functions as a Complementary Skill for the sensor's PER Roll, thus making it more likely that the sensor obtains an accurate reading. If the roll fails, the sensor fails to

FICTIONAL SYSTEMS

In the fictional settings of *HERO System* campaigns, many types of communications and sensory equipment that don't exist in the real world could be available to the PCs. This is particularly true in Science Fiction campaigns, where starships and characters alike often have Rubber Science "scanners" that can find nearly any type of energy or physical phenomena, communications systems that can broadcast at faster than the speed of light, and so on. Systems Operation covers these devices. Since any potential modifiers depend entirely on the type of technology and the setting involved, the GM should come up with rules for them, using the rules for regular Systems Operation use as guidelines.



find whatever's sought (it doesn't get to make a PER Roll); if it fails badly (by 4 or more), the character obtains incorrect information from using them.

Typically using sensors to search for something has a Base Time of a Full Phase, but this can vary depending on the type of sensor involved, what's sought, the amount of interference present (if any), and other factors.

Electronic Surveillance Measures

Electronic surveillance measures (ESM) is a type of electronic warfare that consists of looking for, intercepting, tracking, and identifying enemy signals. With the proper equipment, an ESM technician can "see" every radar platform within his range, which depends on equipment sensitivity but is usually about three times as long as the range over which the enemy radar can see him (and also much longer than the range of his own side's radars).

To defeat ESM, a technician uses EMCON (Emission Control). A platform subject to EMCON transmits nothing — it shuts off all active sensor systems, relying solely on passive sensors instead, and thus can't be detected by ESM. ECM methods also include SuperRBOC (Super Rapid Blooming Offboard Chaff, canisters of foil strips fired away from a ship or aircraft to confuse radar; submarines have equivalent noisemakers; see *Radar,* below, for more information) and Infrared Washdown (washing a ship's hot areas to cool them down). See *Radar,* below, for some characteristics of radar systems that ESM technicians use to identify them.

As of the early twenty-first century, the most advanced ESM system can perceive the *intrapulse characteristics* of enemy signals. This means they can detect the unique features of the crystals resonating in the radiated frequency generator, allowing them to identify the enemy system precisely. The earliest ESM systems picked up audio signals, which the operator had to identify using experience and reference books. As the technology advanced, more and more of the identification function was built into the system, leading to the Specific Emitter Identification technology of the latest ESM devices.

MAKING RECORDINGS

In many cases sensors are connected to devices that make a record of what the sensors perceived for later analysis. In most situations this function is automatic, requiring no roll. If for some reason making an accurate recording is crucial, the GM can have the character make a Systems Operation roll (the Base Time for this varies, depending upon how long the substance/phenomenon in question is to be observed). If the roll succeeds, the character obtains an accurate recording; if it fails, the recording doesn't work or is somehow invalid. If it fails badly (by 4 or more), the recording is somehow wrong or causes other problems for the character.

ANALYZING RECORDINGS

Characters sometimes need to perform in-depth analyses of recordings to extract useful data from them. This includes isolating the sounds on an audio tape to eliminate "clutter" so valuable sounds can be heard clearly, or digitally "magnifying" part of a video recording using computer software so tiny details are visible ("digital zoom"). This task may require a Systems Operation roll, sometimes at a penalty set by the GM to reflect the difficulty of getting the desired information ("damage to subject" penalties may also apply). It has a Base Time of 1 Turn for simple tasks (like using an advanced digital zoom feature on a computer) and 1 Hour for more complex ones (like isolating a single sound on an audio tape of a concert). If the roll succeeds, the character obtains an accurate analysis. If it fails, he can't obtain the information he wants; if it fails badly (by 4 or more) he either destroys the medium or obtains incorrect data.

Analyzing recordings may also include *changing* them — for example, using powerful computer software to alter a videotape to replace the murderer's face with that of an innocent person. This requires a Base Time of 1 Hour or longer and a Systems Operation roll as described above.

DISRUPTING AND JAMMING SENSORS

Systems Operation allows characters to disrupt or jam another person's use of sensors. This qualifies as a form of electronic warfare (see above) and should be handled as such. It's particularly common in some Military Science Fiction campaigns where one starship tries to obtain a "sensor lock" on another so it can accurately fire its weapons, and the potential target does its best to disrupt the lock to prevent that.

TYPES OF SENSOR SYSTEMS

The type of sensors a character's working with can affect what he can do with Systems Operation and how easy it is to do. Some common types of systems include:

Audio And Video Recording Devices

Ranging from tape recorders, to VCRs and DVRs, to computer systems able to digitally record information gathered by sensors they're connected to, recording devices are an essential part of many sensor systems. A character with Systems Operation knows how to use them to retrieve recorded data, display that data... and if necessary manipulate that data (see above).

Lidar

LIDAR (Light Detection And Ranging) is similar to radar (see below) but uses light instead of radio waves. By broadcasting light at a target and recording how the light is reflected back to the instrument, the operator can gather various types of data. Typically lidar is used to determine the distance between one object and another (*i.e.,* rangefinders), to measure chemicals in the atmosphere (differential absorption lidar), and to determine the velocity of moving objects (Doppler lidar).

Radar

RADAR (RAdio Detection And Ranging) is a technology first developed in the 1930s and deployed for practical effect during World War II. A radar device projects radio waves that bounce off objects and return to the device's receiver. By analyzing the waves, the device can determine the distance to the object, its velocity, and its direction of movement. Radar is a vital component of many military sensors (both offensive and defensive), air traffic control systems, meteorological sensors, "radar guns" used by police to catch speeding motorists, and many other devices.

Early radars used long wavelengths, meaning they could only detect large objects (like airplanes) and often received only vague readings. Modern radars use shorter wavelengths that let them perceive much smaller objects — some can accurately image objects smaller than a loaf of bread. Some objects, such as "stealth" airplanes, are deliberately shaped to minimize their "radar profile" and thus make them harder to detect with radar (or even invisible to it). Some military vehicles can also emit *chaff,* reflective strips or wires of metal that scatter but don't reflect radar waves, thus protecting themselves from being "seen." (See *The Ultimate Vehicle* and *The HERO System Vehicle Sourcebook* for how to buy these abilities using Powers.)

Many things — signal noise (noise produced by the radar itself), atmospheric phenomena, birds, radio frequency "clutter" from the ground and other objects, and so on — can interfere with radar (in game terms, these count as "interference" penalties to the radar's PER Roll). The higher a radar's "signal to noise ratio" (SNR) the better its ability to get an accurate reading despite such interference. (In game terms, the higher a radar's PER Roll, the higher its SNR.) Characters can minimize this sort of interference using all sorts of technologies and techniques, generically referred to as "signal processing" (see above for how to do this in rules terms).

Many types of radar exist. The most common are radars used to scan the sky for aircraft, atmospheric phenomena, and the like. They work on over a dozen "bands" ranging from 3 megahertz up to 110 gigahertz. For example the HF ("high frequency") band is used for coastal radars, L ("long") for air traffic control and surveillance, C for weather radars and satellite transponders, UHF for ballistic missile detection and penetration of ground and foliage, and X for missile guidance, marine radar, weather radar, and medium-resolution mapping and ground surveillance. Military roles and functions for aerial radar include early warning (EW) radar, target acquisition (TA) radar, surface search (SS) radar, target tracking (TT) radar, fire control (FC) systems, missile guidance systems, and battlefield reconnaissance radar. Other types of radar include ground effect radar (which tracks objects on the ground and is used in some security devices) and ground-penetrating radar (GPR, used for subsurface exploration in search of oil, archaeological artifacts, and the like).

Radar devices have numerous characteristics: radiated frequency (RF, the signal's transmitted frequency); pulse width (PW, how long the radar transmission lasts, usually in microseconds or nanoseconds); pulse repetition frequency (PRF, the number of pulses transmitted per second); pulse repetition interval (PRI, the time between the leading edges of the pulses, usually measured in microseconds); scan type (the type of scan used — 360-degrees [like most air-searching radars], over a particular section or area, conical [as with most fire control systems], steady [caused by a weapon lock-on], and so forth); scan rate (how often a radar "paints" a target); and so on. By analyzing a transmission's characteristics, an electronic warfare specialist can determine the type of radar being used, and possibly the platform it's carried on and maybe even the individual radar unit itself (which can tell him that a specific ship or plane has been deployed in a specific area, and so forth). This requires a Systems Operation roll with a Base Time of 1 Turn. If the roll succeeds exactly, the character identifies the type of radar; if it succeeds by 2, he identifies the platform (see below); if it succeeds by 4 he identifies the exact radar in use. If the roll fails, he cannot identify anything; if it fails badly (by 4 or more), he misidentifies the radar in use (or misses the signal entirely). Misidentification can mean identifying an enemy as a friend (or vice-versa) or identifying an innocent object as hostile.

For game purposes, a character trying to identify a radar platform who succeeds with his roll by 2 or more (see above) can identify it as belonging to one of five classes: Aircraft; Marine Surface Craft; Submarine; Ground Vehicle; Ground Installation. If the roll succeeds by 4 or more, the character can identify the specific type of platform in question (such as Carrier, Cruiser, or Destroyer for Marine Surface Craft), the specific type of radar used, and in many cases the specific vehicle by name.

Some radars have RF or PRI "agility," meaning they shift between a range of values for those characteristics. This makes them harder to jam (-1 on all attempts) but often more distinctive and thus easier to identify (+1 on all attempts).

Sonar

SONAR (SOund Navigation And Ranging) is similar in some ways to radar, but uses sound waves underwater to detect other ships, assist with navigation, find schools of fish, take "echo soundings" to measure the depth of the water, and the like. Unlike radar it doesn't work in the air, just underwater. The first passive sonar devices (which perceive sounds given off by other objects, but generate no sound themselves) were invented in 1906; active sonar (which gives off sound pulses ["pings"] and analyzes the sound that "bounces off" objects and returns to the device) followed in 1915.

Many factors can affect the accuracy of sonar. Chief among these is the fact that water salinity and temperature affect the speed of sound. The thermocline, a marked change in water temperature between 30 and 100 meters deep (15"-50"), is particularly likely to cause problems because it "bends" the sound waves. The GM can apply "weather/atmospheric conditions" interference penalties as appropriate to reflect these conditions.

A skilled sonar operator can often identify many objects and watercraft by the sounds they make, both innately and when pinged by sonar waves. In game terms, such a character has KS: Sonar Profiles. Sonar systems often have databases of sounds built in so they can identify what they perceive.

Weapons Systems

Advanced weapons such as missiles are launched with the *Systems Operation* Skill. Each type of advanced weapon has its own Weapon System subgroup — Patriot missiles, antimatter space torpedoes, and so forth. (This does not apply to vehicular weapons; those require WF: Vehicle Weapons.)

Other Rules

EQUIPMENT

Systems Operation requires equipment — the devices used to transmit and receive communications, sense objects and phenomena, and so forth. Examples include radio broadcast and receiving units, scanners able to receive signals from the entire radio spectrum, radar arrays, sonar arrays, recording devices, and the like. Without such equipment characters can rarely make use of Systems Operation.

POWERS AND SYSTEMS OPERATION

Characters with Enhanced Senses may not need equipment to use Systems Operation. For example, perhaps a character who can sense and project radio waves buys Systems Operation as a form of the *Power* Skill, allowing him to better analyze the information he receives from his innate High Range Radio Perception and Radar, to locate various radio frequencies, and even to engage in electronic warfare. Sense-Affecting Powers that affect the Radio Group can block, trick, or interfere with Systems Operation equipment.

CONSEQUENCES OF FAILURE

The consequences of failing various Systems Operation rolls are discussed above. Generally, a failed roll means the character doesn't find what he's looking for, receive/send the transmission, or the like; a badly-failed roll inconveniences or harms him in some way (for example, it means he misinterprets data or damages his equipment).

BASE TIMES

For some tasks the text above lists a Base Time. For operating devices with Systems Operation generally the Base Time is a Half Phase, but the circumstances modify this extensively. Getting a device "warmed up" and ready for use may require many seconds (or even minutes), and operating a

communications system takes as long as the conversation being conducted. The time required to transmit or receive large amounts of data depends on the speed and strength of the signal.

SUBDIVIDING SYSTEMS OPERATION

As described above, Systems Operation is a "cinematic" Skill — characters using it can operate any kind of system from advanced weapons, to satellites, to air traffic control technology. This approach may not be appropriate for highly "realistic" campaigns, particularly those that emphasize high technology. In those games, the GM may wish to break the Skill down into categories.

In an effort to make this Skill a little more "realistic" and differentiate technology-based characters a bit, the Expanded Systems Operation text box presents one possible scheme for subdividing Systems Operation, though others are certainly possible given the nature and prevalence of technology in a campaign. Characters can learn any one category for 2 Character Points for a (9 + (INT/5)) roll; each additional category costs +2 Character Points, or each additional subcategory +1 Character Point; improving the roll for all categories known costs +2 Character Points for each +1 to the roll.

SYSTEMS OPERATION BY GENRE

Systems Operation varies tremendously from genre to genre and period to period based largely on what sorts of technology are available (see the text box on page 330). In a Modern campaign, it allows characters to operate radar screens and monitor radio transmissions. In a Future campaign, it lets them use high-tech sensors to sweep for ships, planets, and stars. Characters could examine a planet for cities, radioactivity, life forms, or metals, and then communicate their findings back to headquarters via hyperspace radio. The Obsolete And Advanced Technology rules from Chapter One, and related rules, often apply. Systems Operation generally has no applicability in pre-industrial settings.

Fantasy

This Skill does not apply in Fantasy campaigns, though it would apply in games featuring magicomechanical technology or the like. In more traditional Fantasy settings, the GM might allow characters to buy Systems Operation to reflect their knowledge of, and ability to use, low-tech signaling systems (signal fires, semaphore-type flags, drum networks, and the like). Additionally, the GM might require characters to use Systems Operation to work complex siege engines, instead of just buying a Weapon Familiarity.

In High Fantasy games with copious magic, it's possible that wizards would buy Systems Operation (perhaps renamed) as the Skill with which to use crystal balls and similar enchanted items. They might even have the ability to engage in "magic warfare" instead of electronic warfare as they jam other wizards' communication spells, perform divination rituals to pinpoint enemies to target with attack spells, and so forth.

EXPANDED SYSTEMS OPERATION

Communications Systems (may be purchased as a group)
Broadcast Communications (television or broadcast radio equipment)
Cellular & Digital Communications (cellular phones, pagers, and so forth)
ESM/ECM/ECCM (equipment specifically designed to detect and confuse opposing communications systems)
Radio (standard radio systems, CB radio, ham radio, military radios)
Satellite Communications (use of satellites and satellite networks to transmit signals)
Telegraph Communications (installing and using telegraph machines)
Telephone Communications (installing and using the phone system)
FTL Communications
Dimensional/Temporal Communications

Computer Systems (may be purchased as a group) (Characters with the Computer Programming Skill automatically have knowledge of this group, but may purchase Systems Operation with it for use as a Complementary Skill.)
Basic Computers (basic desktop and laptop systems, PCs, Macs)
Cyberspace Systems (BBSes, the Internet, commercial online services, cyberspace)
Mainframes (UNIX- and VAX-based systems, large corporate networks/intranets)
Military Computers
Networks

Environmental Systems (may be purchased as a group)
Life Support Systems (breathing gases, heating, and so forth)
Personnel Support Systems (food synthesizers, waste management, and so forth)
Recreation Systems (games, holo-chambers, and so forth)

Medical Systems (may be purchased as a group)
Medical Sensors (x-ray equipment, MRI equipment, and so forth)
Surgical Equipment

Sensor Systems (must be purchased separately)
Air/Space Traffic Control Systems (other than radar and radio)
ESM/ECM/ECCM (equipment specifically designed to detect and confuse opposing sensors)
Lidar
Metal Detectors
Radar
Sonar (passive and active arrays, towed arrays)
FTL Sensors
Dimensional/Temporal Sensors

Weapons Systems (must be purchased separately; see text)

Pulp

In the Pulp era, this Skill primarily applies to radio (and, for Gadgeteers and their ilk, primitive television systems) — radar's only just under development and is a top-level military secret, so most PCs will never encounter it; sonar likewise primarily consists of military prototypes. Radios are common, but not nearly as sophisticated or easy to use as modern-day versions; characters may have to make frequent rolls to maintain the strength of a transmission, overcome interference, and the like.

Western/Victorian

In these genres Systems Operation applies primarily to the telegraph (though it does not grant knowledge of Morse Code; see page 213). Invented independently in 1837 by Samuel Morse (US) and Wheatstone and Cooke (UK) based on some earlier work by others, the electric telegraph allowed messages to be sent long distances along wires. (Wireless telegraphy followed beginning in the 1890s and early 1900s.) Telegraphers, typically using the

Morse code of dots-and-dashes invented by Morse and Alfred Vail, don't have to make Systems Operation rolls for routine operation of a telegraph, but must roll when there's interference on the line or other problems. A telegrapher's distinctive way of sending signals (his "fist") could be identified by someone familiar with it; this requires a roll with Systems Operation (assuming the character has been exposed to the target's fist before).

SYSTEMS OPERATION TECHNOLOGY

This table summarizes some of the types of technology Systems Operation applies to, from the most primitive to the most advanced currently known (or speculated about).

1. Primitive: telegraph; early telephone

2. Rudimentary: wireless radios, crystal radio sets

3. Early Electronic: telephone switchboards, early radios

4. Basic Electronic: advanced radios, early radar and sonar, early jamming techniques, hydrophones

5. Standard Electronic: encrypted radio, radar, sonar, jamming techniques, early anti-jamming techniques

6. Advanced Electronic: 3D radar, advanced sonar, sophisticated communications, advanced countermeasures.

7. Computer-Controlled Electronic: ECM suites, AEGIS radar, sonar suites, communications suites

8. Futuristic Electronic: artificially intelligent sensor/communications suites.

At the GM's option, characters can use this table instead of the standard rules for Obsolete And Advanced Technologies (see Chapter One). For each step up this list (*i.e.,* more primitive) that an opponent's Systems Operation equipment is, a character gets a +2 bonus to his rolls; for every step down (*i.e.,* more advanced) that an opponent's systems are, he suffers a -2 penalty.

TACTICS

Type: Intellect Skill (roll: 9 + (INT/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

Characters with this Intellect Skill know how to fight effectively and efficiently. Generally Tactics only applies to discrete battles and small units (squads, platoons, or companies at the most), not to overall strategic or theater planning (which requires a host of Knowledge Skills in addition to Tactics; but see below).

A character with Tactics is an expert at individual and small-unit combat. He knows how to evaluate and muster his tactical assets for best effect. He usually knows what must be done to win a battle or conflict (or at least he can find the best position to set up his forces), and when a battle or tactical situation is hopeless. He can also direct the tactics of small units. Generally speaking, he's familiar with military history (though not as well-versed in it as someone with an appropriate Knowledge Skill) and can compare a given tactical situation to a similar battle of yore as part of his analysis of the situation.

Using Tactics

In many campaigns it's best to use Tactics sparingly, though the suggested uses below may make it an attractive purchase for many characters. It's most useful when a *character* would have a chance to figure out how to deal with a combat situation, but the *player* cannot. In that case a successful roll allows the GM and other players to provide assistance and advice, thus simulating the character's advanced tactical awareness compared to that of the player.

This is particularly helpful when a character's about to do something tactically foolish or disadvantageous and he ought to realize it. In that case the GM can call for a Tactics roll. If the roll succeeds, the GM advises the player that the proposed action is dangerous (and why, in at least vague terms) and allows him to reconsider; if the roll fails, the character goes ahead with his plan of attack.

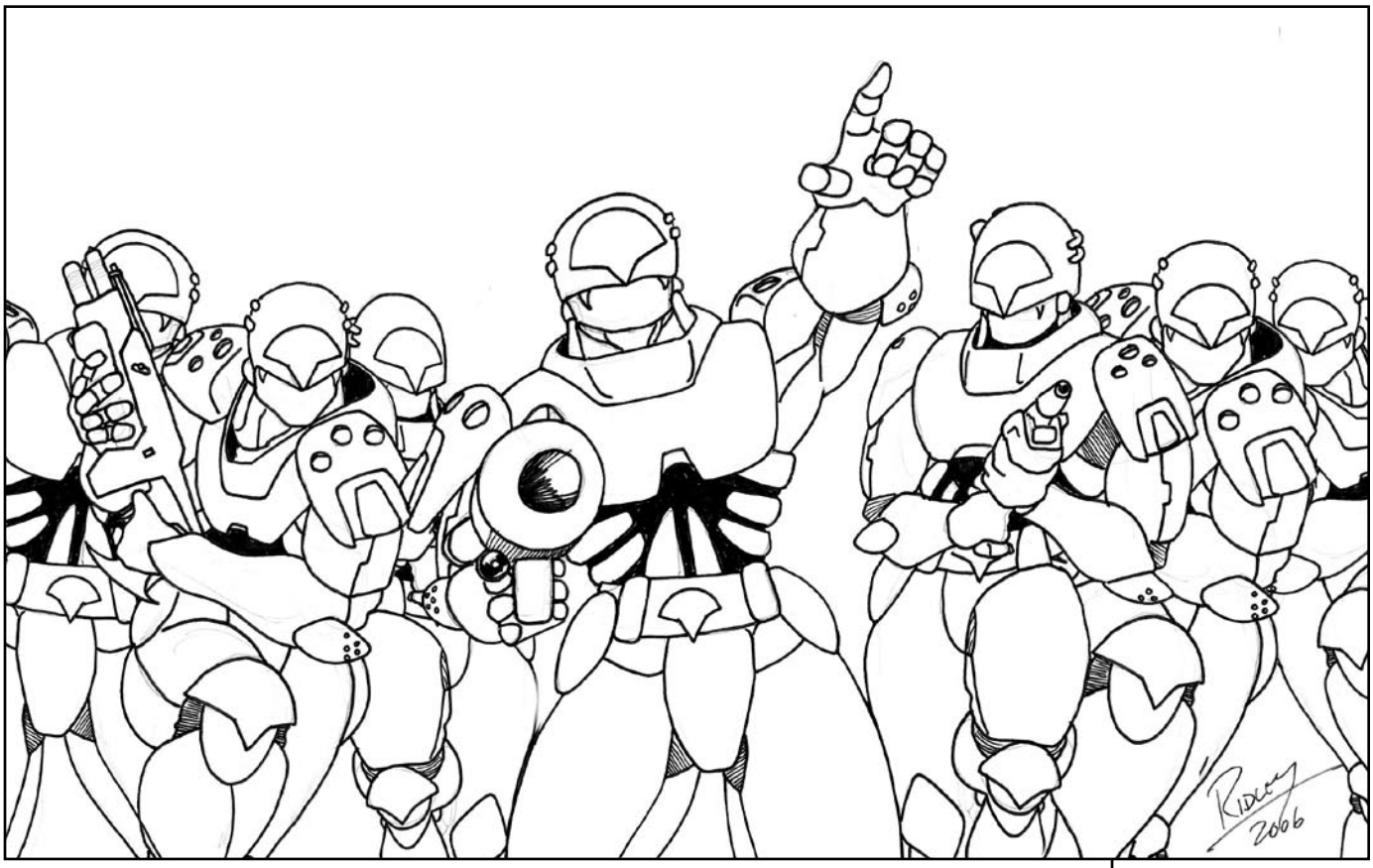
In situations where characters use Tactics to inspire others, such as in most mass combat situations, the GM may have them make the roll based on PRE rather than INT.

Some other uses of Tactics include:

MASS COMBAT

If the campaign uses the mass combat rules (described beginning on page 207 of *Fantasy Hero*), Tactics plays a significant role in that activity — for example, it's the Skill a character uses to lead a unit into battle. See *Fantasy Hero* for details.

In a mass combat situation, a character with Tactics can study and evaluate an enemy force, determining its strength, tactical assets, and the like in comparison with his own force. In effect, this functions like the *Analyze* Skill (Analyze Tactical Situation, if you will); refer to the rules for that Skill for more information.



ANTICIPATING ENEMY ACTIONS

In situations where a character might be able to anticipate the actions of an enemy (such as when or where he'll attack, what his goal for the combat is, or which PC a villain intends to attack first), the character can make a Tactics roll with a Base Time of a Half Phase. If the roll succeeds, the character correctly predicts the enemy's actions and can prepare for them (at the GM's option, this might give him a +1 OCV or DCV for or against one enemy for one Phase or so). If the roll fails, the character learns nothing helpful; if it fails badly (by 4 or more), the character incorrectly anticipates enemy action and suffers a -2 DCV against the enemy's next attack versus him.

In the case of ambushes and similar attacks, a successful Tactics roll serves as a Complementary Roll to the character's PER Roll to spot the ambush.

BATTLEFIELD ANALYSIS

A character can use Tactics to evaluate the environment in which he's fighting and determine what features, if any, might be tactically advantageous to him. For example, in mass combat he might look around the battlefield and realize that a specific hill will give his unit several advantages (including a commanding view of the conflict as a whole). Similarly, when the PCs are fighting a group of villains in a factory, a character who succeeds with a Tactics roll could figure out that the pipes on the wall are steam pipes... and that he might be able to use them to set up a devastating surprise attack against one of the villains by causing them to burst at the right place and time.

Battlefield analysis has a Base Time of a Half Phase. If the roll succeeds, the GM should inform the character about any tactical assets in the locale that the character could be aware of. (Sometimes there may be none, in which case the GM so informs the character. Sometimes the character may roll in response to a question [like, "Are there any barrels of oil nearby?"], with the GM answering in the affirmative if the roll succeeds.) If the roll fails, the character doesn't notice any tactically useful assets; if it fails badly (by 4 or more), he mistakenly identifies something useless as being tactically valuable (or vice-versa).

IMPROVING SMALL UNIT EFFICIENCY

Characters with Tactics are well-versed in small unit combat, and the "unit" they're most familiar with tends to be the player character group or team. At the GM's option, a character can use Tactics to improve the efficiency of his team in combat. This has a Base Time of a Full Phase and typically can only be done once per combat. The character has to give specific instructions to each of his teammates (which assumes he has some means to communicate with them without the enemy overhearing them). He then makes his roll. For each point by which the roll succeeds, the character receives a +1 bonus which he can assign to any character (himself or a teammate). The character determines how much of the bonus to assign to which of his teammates; he can assign all the bonus to one person, split the bonus up equally, or the like. The recipients of the bonus can use them to improve OCV or DCV, as if they were 8-point Combat Skill Levels with 1 Charge. However, the

recipients only get their respective bonuses *if* (a) they obey the instructions the character gave them, and (b) do so on their next Phase (whether it takes place in the same Segment the character made his roll or a later Segment). The bonuses, once used, fade away; characters don't get to keep using them for the duration of the combat. If the roll fails, the character receives no bonuses; if it fails badly (by 4 or more), he and each of his teammates suffers a -1 DCV for the next two Segments.

Example: *The Champions are fighting the Ultimates. Ironclad decided to try to use his Tactics roll to improve the team's efficiency. Using his team radio, he tells Defender to Entangle Slick, Nighthawk to attack Binder from behind, and Sapphire and Witchcraft to double-team Cyclone while he takes on Blackstar (Thunderbolt's already unconscious). He makes his Tactics roll, succeeding by 4. That gives him a total of +4 worth of bonuses to assign. He decides to give +1 to Defender, +2 to Nighthawk, and +1 to himself. These bonuses only apply if the Champions follow his instructions on their respective next Phases; anyone who does anything else on his next Phase loses the bonus.*

PLANNING AMBUSHES AND ATTACKS

The counterpart to anticipating enemy actions is planning one's own actions for best effect and to thwart the enemy's ability to figure out what one plans to do. To some extent many functions of Tactics do this one way or another, but special rules apply to ambushes. When a character with Tactics sets up an ambush, he can make a Tactics roll with a Base Time of 1 Turn (perhaps only a Full Phase if he doesn't have more than six people to plan for). If the roll succeeds, for every 2 full points by which it succeeds the enemy suffers a -1 penalty to his PER Roll (thus, -1 if the roll succeeds by 2-3, -2 if it succeeds by 4-5, and so on). If it fails, the character's enemy suffers no penalty; if it fails badly (by 4 or more), the enemy receives a +2 PER Roll bonus to spot the ambush.

Similarly, in a combat pitting a group of PCs against a similar group of adversaries, a character can make a Tactics roll to determine which enemy he can most effectively attack. If the roll succeeds, the GM advises him about which foe he thinks he can do the best against given all the available information. If it fails, the character learns nothing; if it fails badly (by 4 or more), the character misjudges his enemies — the GM advises him to attack one he's not so effective against.

PLANNING FORTIFICATIONS

Tactics does not make a character a combat engineer (or any other kind of engineer), but it does tell him how to attack or defend a fortification effectively. That in turn means he knows how to lay out and plan a fortified area for maximum defensiveness. This task has a Base Time of 1 Hour and may involve studying the landscape, evaluating the supplies and laborers available for the job, and so forth. If the character's roll succeeds, he's done his best to take advantage of his assets and minimize the fortification's liabilities. If it fails, the fortification is no better or worse than average; if it fails badly (by 4 or more) the character has overlooked a vulnerability that an enemy can exploit.

TACTICALLY ADEPT COMBAT

A character with Tactics can often plan his attacks against a single enemy for maximum effectiveness. This is similar to a Surprise Move bonus (see page 381 of *The HERO System 5th Edition, Revised*) though it represents tactical skill moreso than surprise. If the GM believes Tactics might help a character in a specific situation against an enemy, he can allow the character to make a Tactics roll as an Action that takes no time. (A Knowledge Skill of that foe is Complementary.) The character gets a +1 OCV for every 3 full points by which the Tactics roll succeeds (*i.e.,* +1 if the character makes his roll by 3-5, +2 if he makes it by 6-8, and +3 if he makes it by 9 or more). (The GM may alter this bonus as he sees fit.) This bonus applies to the character's next attack against that foe, which must occur in the Phase in which he made the roll. If he doesn't attack that foe that Phase (for whatever reason), he loses the bonus.

If the roll fails, the character gets no bonus. If it fails badly (by 4 or more), the character usually suffers a corresponding OCV *penalty* because he's misjudged his foe.

MODIFIERS

For most Tactics rolls, familiarity with the enemy helps a character considerably. If the character has an appropriate Knowledge Skill he can make it as a Complementary Skill Roll, with bonuses to that roll for the number of previous encounters between the two adversaries (+1 for one encounter, +2 for 2-3 encounters, +3 for 4-7 encounters, +4 for 8-15 encounters, and so on). If a character lacks that Skill, the GM can just give him half of the "previous encounters" bonus directly to his Tactics roll.

The GM can also assign a modifier based on the difficulty of the situation: if the tactical situation is an easy one that the character should have no problem analyzing correctly, he receives a +1 to +2 bonus; if the character's in a tight spot tactically with few options or little ability to properly evaluate the situation, he suffers a -0 to -4 penalty.

Because it's intended for use in combat, Tactics does not suffer the standard -1 to -3 penalty for "combat conditions" (page 33).

EQUIPMENT

Tactics doesn't involve equipment; it's a purely personal Skill.

POWERS AND TACTICS

Tactics is an excellent choice for a Required Skill Roll for abilities that represent a character's superior ability to evaluate foes, analyze combat situations, and so forth. For example, Combat Skill Levels with Require A Tactics Roll could represent a character's tactical efficiency; extra dice of damage with that Limitation represent his ability to hit a target where it hurts the most or lure a target into a "sucker punch."

CONSEQUENCES OF FAILURE

The consequences of failure for most uses of Tactics are described above. In general, a failed roll means the character can't think of a way to beat the enemy, take advantage of the enemy's weaknesses, or maximize his own advantages. A bad failure (by 4 or more) means the character puts himself at a disadvantage by improperly analyzing the situation.

BASE TIMES

The Base Times for Tactics-related tasks are described above.

SUBDIVIDING TACTICS

Tactics already has a fairly limited application, so splitting it up probably isn't necessary for most campaigns. In games that use the mass combat rules a lot, GMs might consider dividing it into two distinct Skills: *Leadership,* an Interaction Skill used to lead units in mass combat; and *Tactics,* an Intellect Skill used to provide combat benefits to the character and his friends in small unit battles, plan ambushes and fortifications, and so forth.

In military action games, the GM might consider expanding Tactics to cover questions of strategy — in other words, directing entire armies, large-scale maneuvers, and logistical matters, not just small-unit tactics. Alternately, Strategy might be a separate Intellect Skill.

TACTICS BY GENRE

Tactics generally works the same from genre to genre and period to period. The only thing that differs are the types of military assets available to the character. A hero trying to direct a unit of Greek hoplites (who only have swords, spears, and similar weapons) has a much easier job than one directing a modern or near-future unit (with its plethora of equipment and technology).

TEAMWORK

Type: Agility Skill (roll: 9 + (DEX/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

This Agility Skill reflects a character's ability to fight well with others in combat. Its sole use under the standard rules is that characters must succeed with a Teamwork roll when they want to Coordinate attacks (see page 378 of *The HERO System 5th Edition, Revised*). Every character involved in the Coordination has to have Teamwork and succeed with a roll; anyone who doesn't have the Skill or who fails the roll cannot contribute to the Coordinated attack. (In other words, a character's Teamwork *does not* apply to all the PCs — he can't just make one roll for everyone to Coordinate, every character who tries to Coordinate has to succeed with his own roll.)

Characters do not have to buy Teamwork separately for each person or group they want to Coordinate with. The Skill simulates a character's general ability to work as a "team" with any other character in combat. But as noted above, a character's Teamwork applies only to himself; he cannot use his Skill to improve other characters' chance to Coordinate.

Gamemasters may want to consider forbidding PCs to purchase Teamwork at the start of the campaign, but allow them to acquire it after play begins (typically after the disorganized group has suffered defeat at the hands of a superior foe). This is a common genre event in which the heroes learn to work as a fighting team to defeat a much more powerful opponent.

EXPANDING TEAMWORK

The standard form of Teamwork has only one use: letting characters Coordinate their attacks. However, the GM might want to consider allowing characters to use it in other ways. Some examples:

■ When characters need to exert STR as a group to move some heavy object (such as moving aside a boulder so they can enter a cavern complex), they can make Teamwork rolls. Each character who succeeds with his roll increases his STR by +5 (or, for a Critical Success, +10) for purposes of determining the group's weight-lifting capacity.

■ When characters attack an inanimate object, such as a door or wall, with the intent to break through it, they can make Teamwork rolls. All the characters who succeed with their rolls get to add the BODY of their attacks together for purposes of overcoming the DEF of the object and doing as much damage to it as possible. (This rule does not apply to attacks against characters or NPCs, just inanimate objects.)

■ If the characters perform a task involving the team Skill use rules (page 22), the GM can include Teamwork in the mix. For example, perhaps it serves as a Complementary Skill Roll to the Complementary Skill Roll made to improve the main Skill Roll.



EQUIPMENT

Teamwork doesn't require equipment; it's a purely personal Skill.

POWERS AND TEAMWORK

At the GM's option, if several characters are Mind Linked together they receive a +1 bonus on their Teamwork rolls. Other forms of communication don't provide this bonus, but the instantaneous and total communication allowed by Mind Link gives characters a real advantage when they try to work together. The GM may refuse to grant the bonus for some forms of Mind Link, such as closed radio networks.

CONSEQUENCES OF FAILURE

Characters who fail their Teamwork rolls cannot Coordinate.

BASE TIMES

Making a Teamwork roll is an Action that takes no time.

SUBDIVIDING TEAMWORK

Teamwork is already highly restricted; there's no need to subdivide it.

TEAMWORK BY GENRE

Teamwork functions the same in all genres and time periods. It tends to be more common in Superhero campaigns, but it's applicable to any game or setting. For example, cinematic ninja in *Ninja Hero* campaigns always seem to attack in well-coordinated groups.

TRACKING

Type: Intellect Skill (roll: 9 + (INT/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

Characters with this Intellect Skill can find and follow a trail by observing tracks, marks, bent leaves, broken twigs, and other impressions left by the person or animal being followed, or by finding traces left by the subject (such as blood, threads from garments, mud from shoes, and the like). They can derive a great deal of information from tracks, such as the weight of the travelers (or how much weight they're carrying), their number, how long ago they passed by, what they were doing, and so forth. Additionally, a character with this Skill knows how to hide tracks and traces, making it harder to follow him and/or persons he's helping. He can also make plaster casts of tracks for later study.

In addition to being able to follow or hide tracks, a character with Tracking knows about tracks in general. He can identify various types of animals from their tracks, for example. Similarly, he can identify the type (and perhaps even brand) of shoes or tires that left a print.

Area Knowledges (of both regions and specific types of terrain) are Complementary to Tracking; so is Survival in some situations. KS: Fewmets — knowledge about animal dung or scat — can also assist a character who's tracking animals.

TYPES OF TRACKS

Broadly speaking, tracks can be divided into three types.

Ground Spoor

The first type are tracks in the most literal meaning of the word: impressions left in the ground by the footfalls of the subject being tracked (this would include overturned stones, scuff marks on fallen logs, bent blades of grass, and other signs made by the feet). In technical tracking parlance, this is called *spoor,* and it's the most reliable form of track in most cases. A character's ability to find and follow this type of track depends largely on the consistency of the ground. Soft ground — snow, mud, loam, and the like — takes impressions easily and clearly; harder surfaces may barely take them, or not take them at all (unless, perhaps, the hard surface is covered with dust or the like). The Tracking Modifiers table lists the modifers based on the consistency of the surface.

Aerial Spoor

The second type of "tracks" are other changes made to the environment by the subject's passage, broadly referred to as *aerial spoor* because much of it is up off the ground. These include bent or stripped leaves (and the condition of leaves already on the ground), broken twigs and branches, upset ant nests and broken spider webs, bark scuffed off trees, dew and insect nests knocked off vegetation, and the like. Whether these types of "tracks" exist depends on the environment, the size of the subject, and other factors.

Litter

The third type of "tracks" are substances or objects left behind by the subject, loosely referred to as "litter." The classic examples here are (a) blood from a wounded person or animal, and (b) threads and bits of cloth torn from garments by the plants and thorns the subject brushes up against. However, many other possibilities exist, including urine, dung (fewmets; see above), personal possessions cast aside to make it easier to move, and so forth.

Blood traces, sometimes referred to as *blood spoor,* deserve special mention. If the tracker also knows Criminology or Forensic Medicine, he can use it to assess the age of the blood, and sometimes even the nature of the injury the quarry suffered (for example, arterial blood is brighter red than venous blood). The tracker can do this with Tracking instead, but at a -3 penalty. Additionally, the shape and size of blood splatters can sometimes provide useful information (such as the speed at which the subject was moving), but the character must have SS: Bloodstain Interpretation to gather this information.

FINDING AND FOLLOWING A TRAIL

The most common uses of Tracking are to find a trail, then follow that trail in pursuit of the quarry.

When a character searches for a trail, first the GM has to decide if he's looking in the right place, and/or whether any tracks exist. If so, the character can make a Tracking roll to find the trail; apply all relevant modifiers from the Tracking Modifiers table. If the roll succeeds, the character finds the trail; if it fails, he doesn't find it (and if it fails by 4 or more, he may *think* he's found it only to discover later that he's been following meaningless signs). He can try again, subject to the standard rules for repeated attempts.

After he picks up a trail, the character has to follow it. The GM should call for periodic Tracking rolls (again, with appropriate modifiers); typically, one every 20 Minutes or 1 Hour suffices. But on difficult ground, one roll per Turn or 1 Minute may be necessary. Similarly, the GM should require a character to make a Tracking roll whenever the person or creature being tracked does something unusual to throw off the pursuit, or passes over difficult terrain (like bare stone), or conditions change (*i.e.,* a hard rain occurs). If these rolls succeed, the character doesn't lose the trail and may keep following it.

Reacquiring A Lost Trail

If a character fails a roll to follow a trail by 1-3, he's lost the trail. Now he has to try to re-acquire it. This requires a minimum of 1 Minute, and possibly longer. If the character succeeds, he finds the trail again and may keep following it. If he fails, the trail remains lost, though he can try again subject to the standard rules for repeated attempts.

If the character fails his trail-following roll badly (by 4 or more), he actually follows the wrong trail for some period of time. Usually this occurs until the next time period passes and he gets another roll as usual, but the GM may be merciful and let him make another roll after just a minute or two.

ANIMALS AND TRACKING

Instead of buying Tracking itself, most animals simply apply the *Tracking* Sense Modifier to their Normal Smell, then make PER Rolls to follow their prey. If a human uses an animal, such as a bloodhound, to help him track, the animal's PER Roll becomes a Complementary Skill Roll to the human's Tracking roll.

EAR TO THE GROUND

One common tracker's trick in fiction and movies is for a skilled tracker to lie down and put his ear to the ground to listen for sounds of distant movement. A character with Tracking can do this by spending 1 Minute and making a roll. Typically the only modifiers that apply are number, size, and weight of subjects and the amount of traffic in the area. If the character's Tracking roll succeeds, he can tell the rough size of what he can hear (based on the amount of noise made) and roughly how far away they are — the more he makes the roll by, the more accurate his assessment is. This trick generally only works if the quarry is within about 10 kilometers and is large enough to make significant amounts of noise; trying to find one person this way rarely works. If the roll fails, the character learns nothing; if it fails badly (by 4 or more) he mistakenly interprets what he hears.

TRACKING MODIFIERS

In addition to the consistency of the ground, the following modifiers affect the finding and following of a trail.

Age And Weathering

Tracks aren't immutable; they change based on the passage of time and other environmental factors. The older a track is, the more likely it is to have degraded based on weather, other tracks covering it up, and so forth. The Tracking Modifiers table has general modifiers for the age of tracks, but the GM should feel free to change them based on the circumstances. For example, a hard rainstorm may degrade tracks much more quickly than normal, while a dry spell might preserve tracks in mud far longer than usual. Wind tends to erode the edges of tracks quickly, and/or cover them with sand, dirt, and debris. Snow might not damage tracks, but would cover them up so that following them becomes, at best, an onerous, time-consuming chore.

While weathering and age usually hinder the tracker, they can provide him with some information regarding when the tracks were made. For example, if the tracks contain water from rain, the tracker knows they were made before or during the most recent rainstorm.

Angle Of The Light

When sunlight's hitting the ground at a sharp angle, it tends to throw tracks into shadowy relief, making them easier to see and follow. The Tracking Modifiers table lists suggested modifiers; the GM should adjust the listed times based on the season of the year, the latitude the character's at, and so forth. Characters tracking at night may obtain similar bonuses for using artificial light sources... but in doing so they give away their position, of course.

Number And Size Of Subjects

Besides the consistency of the ground, another important factor that influences Tracking is the number of subjects being followed. The more people in the group the character's trying to track the easier it is to follow them, because they leave more traces.

Similarly, the size and weight of the subjects may affect Tracking. Small or lightweight beings are less likely to leave tracks and traces, while larger than human ones are more likely. For example, horses and cattle are both "Large" creatures, making them easier to track than humans (all other things being equal).

See the Tracking Modifiers table for modifiers for both these factors. If the quarry is a group of subjects of varying sizes and weights, use the *worst* modifier for the quarry (and thus the best one for the character using Tracking). For example, a group of five halflings and one giant is tracked using the Size modifier for the giant.

Traffic

Traffic — the number of other beings walking in and around the area through which the quarry passes — can make following a trail much more difficult. In fact, in some instances the GM may rule that too many people or animals have walked over the tracks, making following or studying them impossible.

OTHER ASPECTS OF TRACKING

In addition to finding and following tracks, characters with Tracking can do or learn many other things.

READING TRACKS

A properly-trained character can tell a lot from tracks besides just the direction the quarry was traveling in. Some possibilities, plus the rolls and modifiers needed to learn them, are listed below. The GM may apply other modifiers from the Tracking Modifiers table, if appropriate.

Disguised tracks: Sometimes people walk backwards in an effort to fool trackers. A clever tracker won't fall for this; a Tracking roll at -1 tells the tracker what the quarry is up to.

Fatigue: By measuring the length of the quarry's pace relative to his foot size, the tracker can deduce whether he (the quarry) is tired or fresh. This requires a Tracking roll at -2.

Foot size: With measuring tools, it's easy to determine the size of the foot that made the print. Other identifying factors, such as missing toes, may also be apparent. This doesn't even require a Tracking roll.

Gender: Women's feet tend to be narrower than men's, making it possible for a tracker to at least make an educated guess about the subject's gender (this requires a Tracking roll at -3). Similarly, women often wear distinctive styles of shoes.

Height: Measurement of a consistent series of tracks on relatively level ground yields approximate data about the subject's height; this requires an unmodified Tracking roll.

Injury or handicap: The nature and shape of tracks, as well as abnormal wear on the soles of shoes, can tell the tracker if the quarry has an injury to his foot or leg, or some like condition (such as a clubfoot). This requires an unmodified Tracking roll.

Species: By making a Tracking roll, the character can identify the type of animal that left a track. Usually he knows the exact species, but in some cases (particularly when he's not familiar with the environment), he may only be able to discern the general type of animal (for example, he could tell bear, wolf, and fox tracks apart, but not necessarily identify the exact species of bear). Typically the Tracking roll is unmodified, but the GM may impose a -1 or greater modifier if appropriate. A KS of the animal(s) in question, or an AK or Survival pertaining to the local environment, are Complementary.

In a campaign with multiple humanoid species, the GM may also permit characters to identify them by species when tracking them — provided they're barefoot or some feature (like the number of toes or presence of talons) makes one species' footprints different from another's.

Speed: Examination of the spacing between tracks, the foot's point of impact on the ground, and the terminal point (the point at which the foot leaves the ground again) can tell the tracker whether the

subject was walking or running. This requires a Tracking roll at -1.

Subject's age: The size of the foot may indicate that the quarry is young. Older people sometimes walk with shorter, less certain steps that leave a distinctive pattern of tracks.

Time made: Perhaps most importantly, a skilled tracker can tell the age of a track. (For this purpose, standard age modifiers don't apply; they only affect attempts to gain other kinds of information or find/follow the trail.) In the absence of definitive information, a Tracking roll, usually at a -2, tells the tracker the age of tracks, give or take about two hours.

Type and brand: A character with Tracking can identify the type, and sometimes brand, of shoes or tires that left a print. Type requires an unmodified Tracking roll; brand requires a Tracking roll at -2 (or worse), unless the brand is stamped onto the tread or sole. (If the character has access to a forensics lab, they usually keep records of soles and tire treads.)



Weight and load carried: The deeper the subject's print relative to that of the tracker, the heavier the subject is, and/or the more weight he's carrying. A person carrying a heavy weight also tends to take shorter steps and more frequent rest breaks.

Hiding Tracks

In addition to finding, following, and reading tracks, a character with Tracking knows how to hide his tracks so that others cannot find them. This includes stepping in ways that avoid leaving tracks (or leave tracks that are harder to find and read), walking on surfaces less likely to take tracks, properly covering tracks, brushing out tracks and restoring bent or moved vegetation, doubling back on the trail, and so forth.

A character who wants to hide his tracks makes a Tracking roll with a Base Time of equal to twice the time required to traverse the area walked over normally. If the roll succeeds, use its result in a Skill Versus Skill Contest against the Tracking of persons trying to follow him. If the persons trying to follow him only have PER Rolls instead of Tracking, *double* the effectiveness of the Tracking roll. For example, if the subject made his Tracking roll by 3 and others try to find it using PER Rolls instead of Tracking, it's as if he made the roll by 6 instead.

If a character who doesn't have Tracking tries to hide his trail, the GM should evaluate the effectiveness of his efforts and, if appropriate, impose a penalty (typically -1 to -3) on Tracking rolls to find and follow his trail. However, the efforts of a character without Tracking should rarely (if ever) be as effective as those of a character with Tracking.

When a character wants to hide tracks, *reverse* the modifiers for consistency of ground, the number of subjects, the size/weight of subjects, and like circumstances. Thus, trying to hide tracks in snow incurs a -4 penalty; trying to hide the tracks of a Minute being adds a +5 bonus.

One common trick for hiding tracks in fiction is to walk in water — typically, along a streambed. Cinematically this is a great way to throw pursuers off the trail. "Realistically," whether this works depends largely on how much silt the subject kicks up (and how quickly it settles back down or washes away), whether he breaks or bends any water plants, and the care he takes entering and exiting the water.

EQUIPMENT

Generally Tracking doesn't involve equipment, just the character's own innate senses. But skilled trackers have developed a few devices to help them.

A *tracking stick* is a four foot long tapering stick a tracker uses to measure the distance between tracks. If he has trouble finding the next spoor on the trail, he can determine the average distance between tracks and then measure from the last known track. In the right circumstances, this may add +1 to attempts to find a lost trail.

Devices that enhance senses may also assist the tracker. For example, an infrared sensor will show a temperature differential between a recently-made track and the surrounding ground. It also helps the tracker spot his quarry in heavy underbrush and the like.

POWERS AND TRACKING

A number of Sensory Powers may aid Tracking — or, more likely, remove the need for it. Just about any Sense with the *Tracking* Sense Modifier (particularly Normal Smell) is as good or better at following many trails as the *Tracking* Skill;

TRACKING MODIFIERS

Consistency Of Ground	Modifier
Very Soft (mud, snow)	+4
Soft (loam, loose soil)	+2
Average	+0
Hard (packed earth)	-2
Very Hard (stone, pavement)	-6

Age Of Tracks	Modifier
5 Minutes or younger	+3
6-20 Minutes	+2
21-60 Minutes	+1
61 Minutes to 1 Day	-0
1.1-2 Days	-1
2.1-4 Days	-2
4.1-8 Days	-3
8.1-16 Days	-4
...and so on	

Angle Of The Light	Modifier
Dawn to 8:59 AM	+3
9:00 to 9:59 AM	+2
10:00 to 10:59 AM	+1
11:00 AM to 12:59 PM	+0
1:00 to 1:59 PM	+1
2:00 to 2:59 PM	+2
3:00 PM to dusk	+3

Number Of Subjects	Modifier
1	+0
2-3	+1
4-7	+2
8-15	+3
16-31	+4
...and so on	

Size/Weight Of Subjects	Modifier
Insectile, down to 1/64 Human size and/or mass (.032m, or .016") or smaller	-6
Minute, down to 1/32 Human size and/or mass (.064m, or .032")	-5
Minuscule, down to 1/16 Human size and/or mass (.125m, or .064")	-4
Tiny, down to 1/8 Human size and/or mass (.25m, or .125")	-3
Diminutive, down to one-quarter Human size and/or mass (.5m, or ¼")	-2
Small, down to half Human size and/or mass (1m, or ½")	-1
Human size and/or mass	+0
Large, up to twice Human size and/or mass (4m, or 2")	+1
Enormous, up to four times Human size and/or mass (8m, or 2.1-4")	+2
Huge, up to eight times Human size and/or mass (16m, or 4.1-8")	+3
Gigantic, up to 16 times Human size and/or mass (32m, or 8.1-16")	+4
Gargantuan, up to 32 times Human size and/or mass (64m, or 16.1-32")	+5
Colossal, up to 64 times Human size and/or mass (128 m, or 32.1-64")	+6

Traffic	Modifier
No other traffic in the area	-0
Slight traffic in the area	-1
Moderate traffic in the area	-2
Heavy traffic in the area	-3
Very heavy traffic in the area	-4 or more

Normal Sight with the *Microscopic* Sense Modifier may provide a small bonus (say, +1) to Tracking in circumstances where detailed analysis of spoor occurs. Similarly, Clairsentience or Mind Scan may elminate or reduce the need to use Tracking, since a character with them can "follow" the quarry and ascertain his location via super-senses.

CONSEQUENCES OF FAILURE

When a character uses Tracking to find a trail or track, failing the roll simply means he doesn't find it. He can keep looking, using the rules for repeated attempts, until he decides to quit looking. A badly-failed roll (by 4 or more) may mean he finds the wrong trail, or the like. If a character has already found and is following a trail, failure on a Tracking roll is discussed under *Finding And Following A Trail,* above.

BASE TIMES

Some Base Times for Tracking are discussed above. Typically the Base Time for finding a trail when a character has a reasonably precise idea of where to look, or to re-acquire a lost trail, is 1 Turn. (If the character doesn't know where to find someone's trail at all, finding it may take much longer.) Following a trail depends on the length of the trail, the terrain, and other factors. Reading tracks for information requires at least a Full Phase, and often 1 Turn.

SUBDIVIDING TRACKING

If the GM wants to define Tracking more precisely, there are two ways to subdivide it.

First, you can convert Tracking into two distinct Intellect Skills based on the quarry: Track Animals and Track Humans. Thus, a character trained to track fugitives from justice might not know a thing about following animal prints, and a skilled wilderness hunter might not be able to interpret a human's trail at all. (At the GM's discretion, a character with one Skill could use it as if it were the other Skill at a -3 or greater penalty to the roll.)

Second, you can subdivide Tracking by environment, using the Survival categories; characters pay 2 Character Points for the first environment, and +1 Character Point per each additional environment. For example, this would mean that a character well-versed at tracking in Arctic/Subarctic or Temperate/Subtropical regions wouldn't be able to use his Skill (or at most could use it at a -3 or greater penalty) in Tropical environments.

TRACKING BY GENRE

Tracking works the same in all genres. The main difference between genres is how common the knowledge of Tracking is, and the types of surfaces that characters commonly walk on. In *Fantasy Hero* and *Western Hero,* lots of characters know Tracking, and the prevalence of natural environments makes it a frequently-used Skill in many campaigns. On the other hand, modern-day and *Star Hero* characters may rarely, if ever, set foot on soil... and asphalt and starship decking plates rarely pick up impressions from footfalls.

TRADING

Type: Interaction Skill (roll: 9 + (PRE/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

This Interaction Skill gives a character the ability to strike bargains for the sale or purchase of goods, commodities, services, and the like. This includes the ability to:

■ evaluate goods, commodities, services, and the like to determine a fair market price for them

■ assess market conditions and "the lay of the land" for buying, selling, and similar business transactions

■ dicker and haggle over the price of goods, commodities, services, and the like to obtain the best possible deal for himself (whether he's buying or selling)

■ negotiate deals, agreements, and the like

Trading is most common in pre-modern time periods and genres, such as Fantasy or Pirates. In such eras, prices often aren't fixed, so a character with Trading can save (or make) considerable money. The same might apply in a star-spanning stellar economy where far-flung colony worlds have relatively few resources or little contact with the outside Galaxy. However, modern characters can buy it primarily for appraising goods and negotiating deals.

APPRAISING GOODS AND SERVICES

Before a character can negotiate a good trade for himself, he has to have some idea about the value of what he's buying or selling. Trading allows him to evaluate and appraise goods, commodities, services, and the like to determine a fair and reasonable price for them. Of course, he's probably going to use Trading to get more than that (if selling) or buy for less than that (if buying), but he has to know what the "baseline" is so he can determine the best strategy and tactics for his haggling.

The Trading Modifiers table lists modifiers for appraising goods and services based on their commonality — the more often they're traded in the marketplace, the easier it is for a character to value them. A Knowledge Skill or other Skill related to the goods or services in question (such as Electronics for electrical supplies and equipment or SS: Archaeology for ancient artifacts) can serve as a Complementary Skill. At the GM's option, the character makes his Trading roll based on INT rather than PRE, since this use of the Skill reflects knowledge rather than personal appeal.

Appraising goods and services typically takes a Base Time of 5 Minutes, which the character spends evaluating the item, researching it, and so forth. Rarer or specialized items, such as some antiques, may take much longer (hours or days), while extremely common goods and services may take as little as a Full Phase.

TRADING MODIFIERS

Appraising Goods: Item Is...	Modifier
Very Common	+2 to +3
Common	+1
Uncommon	+0
Rare	-2
Very Rare	-4
Unique	-6

Negotiating Prices	Modifier
Demand is high	±1 to ±3 *
Demand is low	±1 to ±3 ^
Goods are illegal	±1 to ±3 ^

* Seller's bonus, buyer's penalty
^ Buyer's bonus, seller's penalty

After a character spends time evaluating an item, he makes a Trading roll. If the roll succeeds, he determines the fair market value for the item. If it fails, he can't determine the fair market value yet; he can try again using the standard rules for that. If it fails badly (by 4 or more) he values the goods or services incorrectly, by +10% per point the roll failed by if he's buying and -10% per point the roll failed by if he's selling.

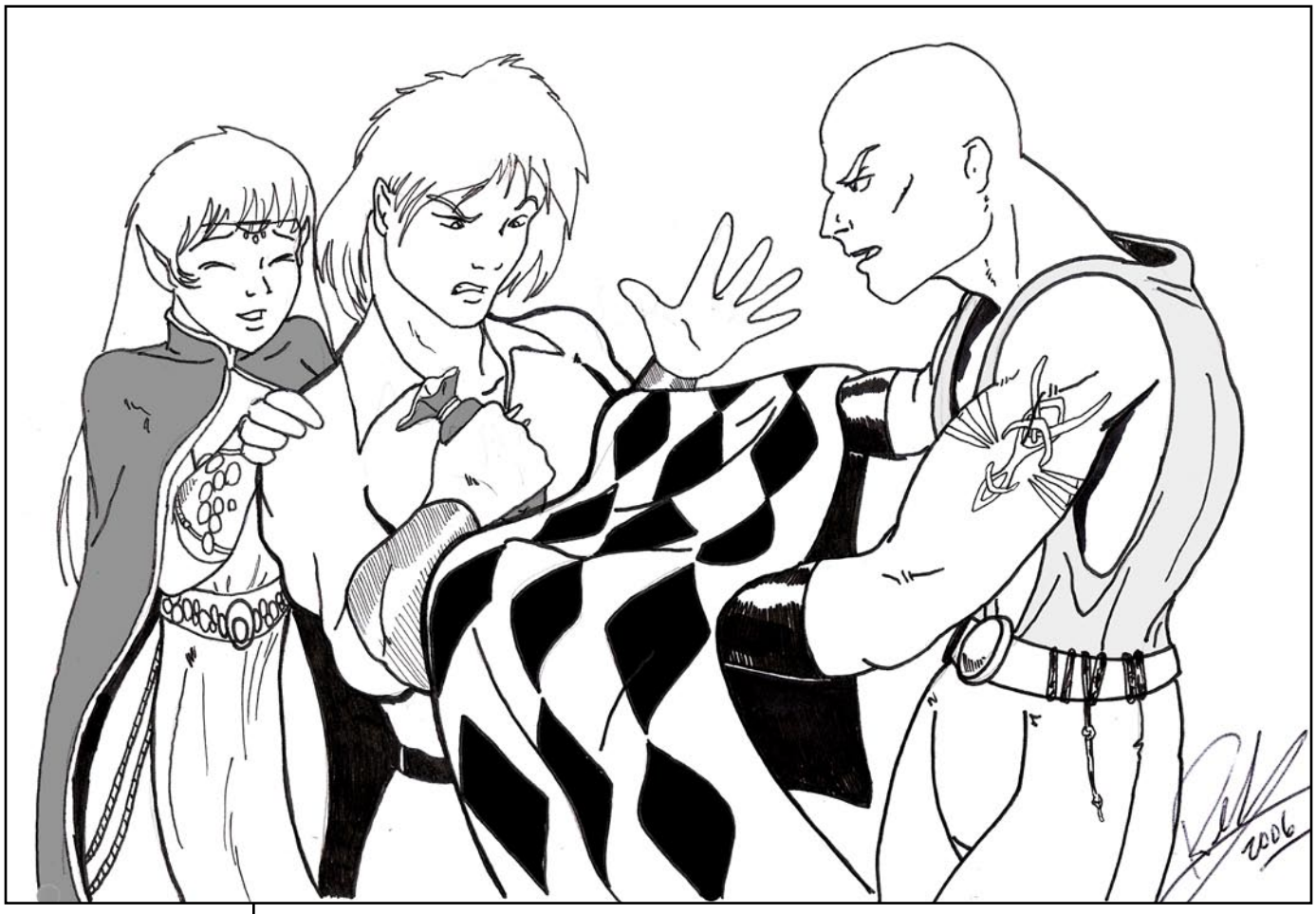
Evaluating The Market

Trading also provides a character with knowledge of market conditions generally, who in his community has a reputation for being a hard or easy bargainer, who are the "top dogs" in a given market, and so forth. If a character's in a marketplace where he's used Trading before or for which he has an Area Knowledge, City Knowledge, or other appropriate Knowledge Skill, the roll is unmodified. If he's unfamiliar with the marketplace, whether due to inexperience with the location or the item in question, he suffers a -1 to -3 penalty. At the GM's option, the character makes his Trading roll based on INT rather than PRE, since this use of the Skill reflects knowledge rather than personal appeal.

Evaluating the market takes 1 Minute if the character's familiar with it, 1 Hour if he's not. After this time, the character makes a Trading roll. If it succeeds, he's judged the marketplace correctly, and at the GM's option this roll serves as a Complementary roll to his later Trading roll to appraise value or negotiate a price. If it fails, he can't determine the state of the marketplace yet; he can try again using the standard rules for that. If it fails badly (by 4 or more) he misjudges the marketplace, suffering a -2 penalty on a later Trading roll to appraise value or negotiate a price.

NEGOTIATING PRICES

The most common use for Trading is to negotiate prices for goods, commodities, services, and other things someone can buy or sell. Each character in the negotiation wants to obtain the best price or terms for himself, so this is a Trading Versus Trading Contest (if one character doesn't have Trading, he can make an INT Roll at -2). You can handle the specifics of the bargaining in one of three ways. Each of them has a Base Time of 1 Turn, but the GM can raise this if necessary based



on the circumstances.

Set Price Starting Point

The first (and generally simplest) method is for the GM to determine a fair market price for the item or service in question as a "baseline" for the negotiations. The character who wins the Contest gets that price, +10% per point he won the Contest by if he's selling or -10% per point he won the Contest buy if he's buying.

However, there are two caveats to this. First, the GM may set some minimum or maximum price; characters shouldn't be allowed to use Trading to obtain ridiculous bargains or charge absurd prices. Second, Trading is not Mind Control. Normally you should let the Trading roll determine the outcome of a price negotiation. But ultimately either character can choose to walk away from the deal regardless of what the dice say if that's the most appropriate thing to do based on common and/or dramatic sense.

Differing Starting Prices

The second method is for each character involved in the negotiation to set a starting price. If both agree, the deal is made — but usually the seller's proposed price exceeds the buyer's proposed offer. (If the seller's stated price is lower than the buyer's offer, the deal takes place at the seller's price.) The characters then engage in a Trading Versus Trading Contest. The loser of the Contest must adjust his proposed price by a minimum of 10% of the buyer's proposed offer per point he lost the Contest by — the seller adjusts downward (*i.e.,* lowers his price), while the buyer adjusts upward (*i.e.,* raises his offer). The loser may adjust his price/offer by a greater amount if desired (perhaps to bring the deal to a quick conclusion). The adjusted price becomes a new threshold for that character — even if that character wins one of the future rolls, he can't re-adjust his price back to its starting total. (The same applies to all future rolls.)

Now the characters have another Trading Versus Trading Contest, with the same results (but governed by the threshold rule stated above). This goes on until the two agree on a price or one party gives in and agrees to the other's latest offer. Regardless of the dice rolls, at no time does the buyer have to raise his offer above the seller's current price, or the seller lower his price below the buyer's current offer — if that happens, the current price/offer takes effect.

Example: *Stonehand the Dwarf and Azarath the Mage are negotiating a sale — Stonehand wants to pay Azarath to enchant his bracers so that they allow Stonehand to attack more swiftly. Stonehand offers 200 silver royals for the job; Azarath counters with 600 silver royals. They now engage in a Trading Versus Trading Contest. Azarath's roll succeeds by 6 and Stonehand's by 3, so Stonehand must raise his offer by ((6-3) x 10% of buyer's offer =) 60 silver royals, to 260 royals. That's still not enough for Azarath, so the Contest goes on. The next round*

Stonehand makes his roll by 4, while Azarath fails. Therefore Azarath must lower his asking price by ((4-0) x 10% of buyer's offer =) by 80 silver royals, to 520 royals. The two are getting closer, but they're not in agreement yet. Negotiations continue....

No Skill Contest

Alternately, the GM can use the first method but dispense with the Trading Versus Trading Contest and just let the PC make his Trading roll. If the roll succeeds exactly, the character pays the GM-set fair market price (if buying) or receives it (if selling). If he succeeds by more than that, for each point he succeeded by he lowers (if buying) or raises (if selling) the price by 10%. If the roll fails, for each point it fails by he raises (if buying) or lowers (if selling) the price under the impression he's getting a bargain or making a killing. The same restrictions and guidelines as for the first Contest method apply.

Modifiers

Several circumstances can modify Trading rolls to negotiate prices. Unusually high or low demand affects prices, though the GM should determine whether the seller's or buyer's roll is modified (both are not, just one). If the goods are obviously stolen or illegal (the buyer can make a Streetwise roll, or an INT Roll at -2, to figure this out), that tends to put the buyer in a better position — it gives him another negotiating point in his favor and puts pressure on the seller to get rid of the "hot" items as soon as possible.

NEGOTIATING DEALS

Characters can also use Trading to negotiate deals, contracts, agreements, and other business arrangements. You can handle this like a price negotiation, except that the parties are dickering over terms of the agreement rather than prices. The loser in the Trading Versus Trading Contest has to concede some point of contention rather than alter his price; the GM determines what constitutes a valid concession. Typically negotiating deals has a Base Time of 1 Hour, but the GM may reduce this for easy deals or raise it for complex ones.

EQUIPMENT

Trading doesn't involve equipment; it's a purely personal Skill.

POWERS AND TRADING

As with other Interaction Skills, Mental Powers can have a major effect on Trading because a character can use them to read his adversary's thoughts or control his actions, and thus obtain a better deal. Characters with Images or Mental Illusions can use them to make goods look better or worse, thus raising or lowering their supposed fair market value.

CONSEQUENCES OF FAILURE

The consequences of failure for the various uses of Trading are noted above.

BASE TIMES

The Base Times for the various uses of Trading are noted above.

SUBDIVIDING TRADING

If the GM thinks that Trading offers too much bang for the Character Point, he can subdivide it into three separate Skills: Appraisal, an Intellect Skill for determining the value of goods and services; Haggling, an Interaction Skill for negotiating the prices of goods and services; and Negotation, an Interaction Skill for negotiating deals and agreements.

If desired, the GM can subdivide Appraisal even further by category of object, such as Artwork, Antiques & Antiquities, Gems & Jewelry, Bulk Food Commodities, Bulk Energy Commodities, and so forth. The first category costs 2 Character Points; each additional category costs +1 Character Point.

TRADING BY GENRE

Trading works the same in most genres — it's just more common in pre-modern ones, or other ones where the prices of goods aren't fixed. For example, in some Post-Apocalyptic or Cyberpunk campaigns society may have broken down to the point where Trading becomes commonplace once more.

Fantasy

The defining Skill of merchants and their ilk, Trading is also often known by craftsmen, alchemists and wizards who sell enchanted items, and thieves who have to dicker with fences for their pay. In a Fantasy culture that conducts transactions based mainly on barter, characters may find this Skill less useful, since it's not as easy to split a horse or a barrel of beer as it is to negotiate a price change.

Pulp

Relatively few modern-day characters buy Trading; by the mid-late twentieth century, prices tend to be fixed. But in the Pulp era it's a different story. Characters are likely to venture into strange lands where bargaining with a merchant isn't only common, it's expected — and during the Depression, small-scale barter economies often sprang up even in parts of the US. So a character who knows how to dicker may save himself a piaster or two.

TRANSPORT FAMILIARITY

Type: Background Skill (roll: N/A, but see text)
Cost: 2 Character Points for the ability to operate one category of vehicles (if purchaseable), or 1 Character Point for the ability to operate one subcategory of vehicles

This Background Skill allows characters to drive or pilot specific types of vehicles, or ride a living mount, under routine conditions. It does not include combat maneuvering (that requires Combat Driving, Combat Piloting, or Riding). Characters don't have to make rolls to operate vehicles normally, but a character with a TF does has an 8- roll for performing dangerous maneuvers (jumps, screeching turns, and so forth). (No Skill Levels of any type can apply to improve this roll, but the GM may apply Skill Modifiers as appropriate.)

Besides being able to operate vehicles of a particular type, a character with Transport Familiarity also knows how to perform routine upkeep and maintenance on his mounts or vehicles (such as changing the oil, feeding the animal, and so on). Additionally, TF imparts some knowledge of the types of vehicles in a given category and their relative merits (think of this as something like a Familiarity with a KS of that type of vehicle, but more restricted).

Each Transport Familiarity (TF) costs 1 Character Point, or 2 Character Points for an entire category (if the category can be purchased as a group). One appropriate 1-point TF is an Everyman Skill in most genres.

Example: *Fast Eddie pays 2 points for Common Motorized Ground Vehicles, 1 point for Small Wind-Powered Boats, and 1 point for Snowmobiles. Eddie now has an 8 or less roll with all of the above mentioned vehicle types.*

A character who's paid Character Points for a Vehicle doesn't need a TF to operate it; since he paid points for it, he knows how to use it. However, this doesn't extend to other Vehicles of that same type. Paying points for a motorcycle doesn't mean a character has TF: Two-Wheeled Motorized Ground Vehicles — it just gives him the ability to drive that one motorcycle. It also gives him the standard 8- roll for maneuvering and Control Rolls (see *The Ultimate Vehicle*) with that motorcycle.

SPECIFIC SITUATIONS

If a character has a Vehicle that has multiple modes of movement and/or can operate in multiple environments — for example, a cinematic spy's car that converts into a mini-sub or a mini-copter — the GM may allow him to simply buy a 1-point "just this one vehicle" TF. However, some GMs may consider that abusive and require the character to buy multiple TFs (one appropriate to each mode/environment).

If a character has multiple Vehicles (or access to multiple Vehicles due to his membership as part of a team or the like), the GM may allow him to buy a single 2-point TF with "all my Vehicles" or "all Vehicles my team uses." Other GMs may consider that abusive and require the character to buy an individual TF for any type of Vehicle he wants to operate. At the very least, a character who's allowed to buy the single 2-point TF should have a reasonable explanation for why he can drive the team's car or motorcycle, but not any other car or motorcycle.

A Vehicle capable of operating itself must have Transport Familiarity (whether obtained by buying Combat Driving/Piloting or direct purchase). Similarly, TF could represent a "user-friendly" vehicle that tells a passenger how to operate itself, or a vehicle that can reconfigure its control systems to resemble ones the operator knows how to use.

A Vehicle that can "link up" with another Vehicle (typically via a Mind Link of some sort) can operate that Vehicle if it (the first Vehicle) has the appropriate TF. This provides a way to "slave" multiple vehicles to a single lead vehicle so they can easily move and maneuver in formation.

If a character chooses Carts & Carriages or Chariots as his free TF for Combat Driving, he still needs a TF of the appropriate riding animal to use it.

EQUIPMENT

By definition Transport Familiarity requires equipment — a vehicle for the character to operate. Without a vehicle, the Skill has no use other than allowing the character to perform minor routine maintenance on vehicles he knows how to operate.

See *The Ultimate Vehicle* and *The HERO System Vehicle Sourcebook* for complete *HERO System* information and character sheets on dozens of vehicles.

POWERS AND TRANSPORT FAMILIARITY

A character with Telekinesis may be able to use that Power to work the controls of his vehicle without having to touch them. (For computer-controlled vehicles, cyberkinetic powers may have the same effect.) In high-powered games (such as many *Champions* and High Fantasy games), characters may have Movement Powers in sufficient amounts to render vehicles (and thus TFs) generally unnecessary.

CONSEQUENCES OF FAILURE

Typically no rolls are necessary with Transport Familiarity. On those unusual occasions when a crisis forces a character to make use of the 8- roll the Skill provides, failure usually means loss of control of the vehicle to some degree (possibly complete loss, if he fails by 4 or more). Depending on the type of vehicle involved, how it's moving, and its speed, this may result in skidding, stalling, crashing into something, colliding with another vehicle, or many other possible outcomes. See *The Ultimate Vehicle* for more information about using and controlling vehicles in the *HERO System*.

BASE TIMES

The "Base Time" for using Transport Familiarity typically depends on the length of the trip involved. If a Skill Roll becomes necessary, using TF is usually a Half Phase or Zero Phase Action.

TRANSPORT FAMILIARITY CATEGORIES

Category	Examples
Riding Animals (A) [includes use of animals in teams, if applicable]	
Camels	
Dogs	
Equines	Horses, donkeys, mules, unicorns
Flying Beasts	Griffins, pegasi, rocs, giant dragonflies
Huge Beasts	Elephants
Swimming Beasts	Whales, sharks, giant fish
Other (purchased by animal type)	
Muscle-Powered Ground Vehicles (B)	
One-Wheeled Muscle-Powered Ground Vehicles	Unicycles
Two-Wheeled Muscle-Powered Ground Vehicles	Bicycles, velocipedes
Carts & Carriages [also requires TF: appropriate riding animal]	
Chariots [also requires TF: appropriate riding animal]	
Common Motorized Ground Vehicles (A)	
Small Motorized Ground Vehicles	Cars, pickups, jeeps, ambulances
Large Motorized Ground Vehicles	Trucks, tractor-trailers, buses
Uncommon Motorized Ground Vehicles (B)	
Two-Wheeled Motorized Ground Vehicles	Motorcycles, motoscooters
Construction & Agricultural Vehicles	Bulldozers, steamrollers, tractors, combines
Tracked Military Vehicles	Tanks, IFVs, some APCs
Wheeled Military Vehicles	Reconnaissance vehicles, some APCs
Railed Vehicles	Trains, cablecars, maglev trains, subways
Air Vehicles (B)	
Balloons & Zeppelins	Hot air balloons, zeppelins, blimps
Small Planes	Propeller planes, autogyros, gliders, volantors
Large Planes	Jumbo jets, C130 transports
Combat Aircraft	F15s, F117As, B2s
Helicopters	
Cold-Weather Vehicles (B)	
Bobsleds	Bobsleds, luge
Sleds [also requires TF: Dogs]	Sleds, sledges, sleighs, dogsleds
Snowmobiles	
Water Vehicles (B)	
Rafts	
Small Rowed Boats	Canoes, rowboats, kayaks
Large Rowed Boats	Biremes, triremes, Fantasy slave ships
Small Wind-Powered Boats	Sailboats, longboats, yachts
Large Wind-Powered Boats	Clipper ships, galleons
Small Motorized Boats	Speedboats, CRRCs/Zodiacs
Large Motorized Boats	Pleasure yachts, tugboats, barges, tankers
Small Military Ships	Cutters, PT boats
Large Military Ships	Destroyers, frigates, aircraft carriers
Submarines	

Category	Examples
Recreational Vehicles (B)	
Hanggliding	
Jetskis	
Parachuting, Basic	
Parachuting, Advanced [requires Basic Parachuting]	
SCUBA	
Skateboarding	
Skating [iceskating and rollerskating]	
Skiing, Snow	
Skiing, Water	
Snowboarding	
Surfing	
Windsurfing	
Science Fiction & Space Vehicles (A) [includes FTL travel, if any]	
Early Spacecraft	Apollo, Mercury, Gemini projects
Spaceplanes	Space Shuttle
Grav Vehicles/Hovercraft	
Personal-Use Spacecraft	Consumers' spacecraft
Commercial Spacecraft & Space Yachts	
Industrial & Exploratory Spacecraft	
Military Spacecraft	
Mobile Space Stations	
Mecha (A)	
Anthropomorphic Mecha	
Beast-Shaped Mecha	
Hybrid/Shapeshifting Mecha	

Notes

A: Can be purchased as a group

B: Must be purchased separately

1. *Riding Animals:* In a Fantasy campaign, where Riding Animals is the prominent TF group, GMs may wish to forbid characters to purchase it as a group.

2. *Parachuting, Basic and Advanced:* Basic Parachuting allows the character to make basic use of a parachute safely, and assumes the character is performing typical MAMO (Medium Altitude, Medium Opening) jumps. Advanced Parachuting (which can only be bought by characters who know Basic Parachuting) allows the character to perform more difficult jumps or aerial stunts; it includes military parachute training and LALO, HALO, and HAHO jumps.

3. *Science Fiction & Space Vehicles:* This TF category encompasses the largest number and variety of vehicles. Gamemasters running Future-era campaigns should consider expanding this category extensively to suit their campaigns. For example, different spacefaring species's ships might require different TFs (one species's controls and methods of construction may differ greatly from another's; a species's arrangement of manipulatory limbs may lead to vastly different controls), by planet or sector of space, by government, and so forth. Science Fiction vehicles include FTL travel if available.

Grav Vehicles/Hovercraft may, at the GM's option, be placed under the "Uncommon Motorized Ground Vehicles" or "Air Vehicles" categories instead.

UNIFYING/SUBDIVIDING TRANSPORT FAMILIARITY

For some cinematic campaigns, the detailed Transport Familiarity Table may not be necessary. Instead, there are simply five types of vehicles — Riding Animals, Ground Vehicles, Air Vehicles, Water Vehicles, and Space Vehicles. Knowing how to operate all of the vehicles in any given category costs 2 Character Points (the GM can change this cost if he sees fit).

On the other hand, in Vehicle-oriented campaigns the GM may want to break Transport Familiarity down even further to create diversity among characters. In this case, sometimes the GM rules



that if a character has one TF pertaining to a category (such as any "Sportscar" TF), that character can operate any vehicle in that category, but suffers a penalty if he doesn't have a TF for a specific type/class of vehicle. For example, in a "Racing Hero" campaign, characters might have to buy every single sportscar as a separate TF, or buy sportscar TFs by brand ("National Motors Sportscars," "Kuroda Automotive Sportscars"). If a character doesn't have the right TF, he can still drive the car but suffers a -1 penalty on Combat Driving rolls.

TRANSPORT FAMILIARITY BY GENRE

Cyberpunk/Near Future

Since minute differences in technology — the "bleeding edge," so to speak — are often crucial in Cyberpunk settings, *Cyber Hero* campaigns often take the "much more detailed" approach to Transport Familiarity. That way a character's ability to use the latest, best car or helicopter has a distinctive game effect.

Dark Champions

Since *Dark Champions* characters tend to be Skill-oriented, GMs sometimes prefer the "much more detailed" form of Transport Familiarity so characters can differentiate themselves.

Fantasy

In Fantasy campaigns, where Riding Animals is the prominent TF group, GMs may wish to forbid characters to purchase it as a group. Instead they must purchase riding animal TFs individually for 1 Character Point per type of animal, or perhaps in 2-point categories if there are many types of riding animals that are relatively similar. Possible categories include Dragons, Equines, Riding Cats, Riding Insects, Riding Lizards, Rocs, and Monstrous Hybrids (griffins, manticores, and so on).

Post-Apocalyptic

Transport Familiarities may become particularly important in a post-apocalyptic world where most vehicles have been destroyed (or damaged to the point of nonfunctionality). A character who finds a manual for a working vehicle and teaches himself how to use it may gain a significant advantage over his enemies... especially if that vehicle is a well-armed tank or jetfighter!

Pulp

Many of the TF categories listed above don't apply, or apply a little differently, in the Pulp era. There are no spacecraft (aside from ones the heroes encounter in Science Fiction adventures, of course!), for example.

Air Vehicles: Most Pulp planes are Small Planes (some of the larger Thirties passenger and cargo craft may qualify as Large Planes). There's no need for a separate Combat Aircraft subcategory; military fighter planes fall under Small Planes. Autogyros also belong to the Small Planes subcategory.

Riding Animals: As with the *Riding* Skill, this category is a much more common Skill than in the present day. With the GM's permission, characters may substitute one of the following TFs for the TF: Small Motorized Ground Vehicles they receive as an Everyman Skill: Camels, Equines, or Huge Animals.

Recreational Vehicles: SCUBA exists only in a primitive form beginning in 1933. Characters can also take *Diving Suit,* the Skill of using diving suits that receive air via a tube from a generator on ship or shore. Parachuting is just one TF; advanced military parachuting doesn't really exist in the sense implied by the two standard parachuting TFs. Hanggliding, Jetskis, Snowboarding, and Windsurfing don't exist.

Science Fiction

In the standard *HERO System* rules, all spacecraft and starships are covered by one simple, inexpensive Transport Familiarity. While that may work well for some Space Opera and Pulp SF campaigns, it's not appropriate for many *Star Hero* settings. For games where the GM desires greater detail, consider each of the subcategories listed under "Science Fiction & Space Vehicles" as a separate, 2-point TF category of its own. (For a setting-specific example, see *Terran Empire,* pages 125-26.)

In Hard SF or high-realism games, GMs may want to go one step further and make each planet's or species's space vehicles a separate TF. Thus, a character with TF: Human Military Spacecraft couldn't safely pilot Mon'dabi Military Spacecraft. As noted in the Transport Familiarity Table, methods of construction, number and placement of manipulatory limbs, control panel organizational logic, and other factors may make it difficult or impossible for one species to use another's starships.

Most of the hovercraft, landspeeders, and gravitic/magnetic ground vehicles common in some SF settings typically fall under the Common Motorized Ground Vehicles category as a *Hovercraft* subcategory. Larger hovercraft and military hovercraft are usually subcategories under the Uncommon Motorized Ground Vehicle category.

In some *Star Hero* campaigns, GMs may wish to add an additional category: Dimensional/Time Vehicles. It covers time machines, dimension-ships, and any other vehicle that can travel between realities or times.

Superheroes

Vehicles in a *Champions* campaign may become truly bizarre. The high-tech "team jet" is a classic of the genre, but heroes and villains could create and operate vehicles in just about any shape and size: a flying platform in the shape of a bat; a teleportation cube; a rocket-powered skateboard; magic skis and surfboards; hovercraft and gravcars in countless varieties; you name it. In some cases a character may take a TF with his vehicle (even though that's not normally required if he's paid Character Points for it) as a way of representing its uniqueness... and keeping other characters from using it. (Defining it as a Personal Focus may accomplish the same objective.)

Western/Victorian

Except for later-era Victorian games, or Victorian campaigns involving "steampunk" technology, Victorian-era TFs are even more limited than in the Pulp era. Characters can't buy any motorized vehicle TFs involving internal combustion engines (either ground or water), few Recreational Vehicles, and no air or space vehicle TFs at all. On the other hand, Riding Animal TFs, Small Rowed Boats, and the like are more common than in the modern day.

TWO-WEAPON FIGHTING

Type: Combat Skill (roll: N/A)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

A character with this Combat Skill has been trained to fight with two weapons, one in each hand. Two-Weapon Fighting (either Ranged or HTH) costs 10 Character Points.

Two-Weapon Fighting is the ability to use the Combat Maneuvers *Rapid Fire* or *Sweep* (see pages 396-98 of *The HERO System 5th Edition, Revised* rulebook), combined with a limited form of the Talent *Ambidexterity,* in an improved manner. It provides the following benefits:

■ even in campaigns that don't use the *Rapid Fire* and/or *Sweep* Optional Combat Maneuvers, GMs should allow characters to use those Maneuvers when they use Two-Weapon Fighting

■ in campaigns that allow all characters to use the *Rapid Fire* and/or *Sweep* Optional Combat Maneuvers, a character using Two-Weapon Fighting only suffers a -2 DCV, instead of the standard halving of DCV. If a -2 DCV penalty would constitute halving the character's DCV (or close to it), the GM may consider reducing the penalty to -1 DCV.

■ it allows the character to ignore the -3 penalty for using his off hand to attack

■ it allows character to ignore the first -2 OCV modifier when making his two attacks. (In other words, the character's first two Attack Rolls are at no OCV penalty; any Attack Rolls thereafter in the same Phase are at a cumulative -2 OCV per Attack Roll.)

Weapons wielded with Two-Weapon Fighting must be usable in one hand, but there are no restrictions on the types of weapons characters can use other than that. (They could, for example, be two identical weapons bought with the "+5 Character Points doubles the number of items of equipment" rule.) A character with WF: Off Hand who uses Two-Weapon Fighting (HTH) gets the standard +1 DCV from that WF.

Characters must purchase Two-Weapon Fighting (HTH) separately from Two-Weapon Fighting (Ranged); the cost and rules are the same. When using Two-Weapon Fighting with HKA or HA weapons, a character's STR Bonus adds to both attacks.

At the GM's option, a character may use Two-Weapon Fighting (HTH) with unarmed HTH attacks, such as punches or Martial Strikes, as well as with armed attacks. The GM could allow characters with innate Ranged attacks (like a superhero's energy bolts) to do the same with Two-Weapon Fighting (Ranged).

Characters using Two-Weapon Fighting may attack the same or different characters with each attack. Of course, with Two-Weapon Fighting (HTH), if the character wishes to attack multiple targets with his two attacks, both must be within HTH Combat range.



Characters using Two-Weapon Fighting are subject to all rules for Rapid Fire or Sweep regarding the Maneuvers they can use, CV modifiers, time required, END cost, number of targets, and so forth. This includes the rule that if the first attack misses, the character automatically doesn't get to make the second attack (though the GM may remove this restriction as a benefit of buying Two-Weapon Fighting). Characters can combine Two-Weapon Fighting with Rapid Attack to perform the two-weapon attack as a Half Phase Action.

Example: *Swordsinger, DEX 27, uses twin katanas and knows the Two-Weapon Fighting (HTH) Skill. He also knows some Martial Arts Maneuvers (Kenjutsu). He gets into a fight against two bank robbers and decides to use Two-Weapon Fighting (HTH) to Sweep them. He suffers no penalties for using a sword in his "off hand," and as long as he makes no more than two attacks will suffer no OCV penalty. He will be at -2 DCV, and performing the attack requires a Full Phase.*

He decides to use a Lightning Stroke (+2 OCV, +0 DCV, +2 DC) to attack Robber #1, and a Slashing Stroke (-2 OCV, +1 DCV, +4 DC) against the other. His first attack is at +2 OCV (Two-Weapon Fighting (HTH) cancels the Sweep penalty, and the maneuver grants a +2 OCV). His second attack is at -2 OCV (the Slashing Stroke maneuver subtracts 2 from his OCV; Two-Weapon Fighting (HTH) cancels the Sweep penalty). He is at 7 DCV (base of 9 [the worse of the two DCV bonuses applies], -2). Because any OCV penalty applies to all rolls, while OCV bonuses do not, Swordsinger will be at +0 OCV with his Lightning Stroke and -2 OCV with his Slashing Stroke.

Example: *Renegade, who knows Rapid Autofire, attacks six bank robbers using his Two-Weapon Fighting (Ranged) Skill with his twin Mini-Uzi submachine guns. He uses Concentrated Sprayfire and Skipover Sprayfire with each Mini-Uzi against the robbers, who have conveniently bunched up into two groups of three robbers each. Group #1 is spread out over four hexes, Group #2 over five hexes. His DCV is -2 for using Two-Weapon Fighting, then halved for using Autofire Skills. Because of his Two-Weapon Fighting, he suffers no OCV penalty for using two weapons; each burst of Autofire counts as one attack. The OCV penalties are -6 for attacking Group #1 (-4 for hexes, -2 for the Skills) and -7 for attacking Group #2 (-5 for hexes, -2 for the Skills), and these add together for a total -13 OCV on both attacks.*

RESTRICTIONS

The following restrictions apply to Two-Weapon Fighting.

Even if a character has both forms of Two-Weapon Fighting, he cannot combine a HTH and Ranged attack into a single use of Two-Weapon Fighting. One form involves Rapid Fire, the other form involves Sweep.

A character may not use Two-Weapon Fighting with an Autofire attack unless he has the *Rapid Autofire* Skill (see above), but may use it with Autofire Skills (such as Accurate Sprayfire). A character

with two Autofire weapons, Two-Weapon Fighting, and Rapid Autofire can Rapid Fire with both of his weapons. However, the standard penalties apply, so he's going to be at -2 OCV per burst after the second (and that means overall, not per hand), at -2 DCV, and so on.

Two-Weapon Fighting is based on, and uses, the mechanic for Rapid Fire/Sweep. As such, it constitutes a single maneuver. A character can't Hold half of it, any more than he could, for example, Hold half a Haymaker or half a Disarm. Similarly, he can't Abort half of it, nor can he choose to perform a defensive action like Block with part of it — Sweep involves attacks, not defenses.

While holding two weapons, a character with Two-Weapon Fighting cannot make just a single attack with the weapon in his Off Hand and use Two-Weapon Fighting to negate the OCV penalty for his Off Hand attack. The Skill doesn't eliminate the Off Hand penalty for any attack, just for a specific method of attacking as described above.

EQUIPMENT

The only equipment Two-Weapon Fighting requires are the weapons used (and even they may not be needed if the GM allows characters to make unarmed Two-Weapon Fighting attacks). Otherwise it's a purely personal Skill.

POWERS AND TWO-WEAPON FIGHTING

Characters with more than two manipulatory limbs do not automatically get to make a normal attack with each limb just because they know Two-Weapon Fighting. This Skill only removes the OCV penalty for one Rapid Fire or Sweep attack. Using additional limbs would count as further Rapid Fire or Sweep attacks, and would incur the normal penalty (though a character could buy Combat Skill Levels to counteract this, thus simulating his ability to attack with many limbs at once).

CONSEQUENCES OF FAILURE

Two-Weapon Fighting doesn't involve a roll other than the associated Attack Roll.

BASE TIMES

Using Two-Weapon Fighting requires a Full Phase Action, as discussed above.

SUBDIVIDING TWO-WEAPON FIGHTING

In campaigns where many characters like to use Two-Weapon Fighting, the GM might consider requiring characters to buy it by Weapon Familiarity subcategory. To use the Skill with any 1-point WF category (like Blades or Axes/Maces/Hammers/Picks) costs 5 Character Points.

TWO-WEAPON FIGHTING BY GENRE

Two-Weapon Fighting works the same in all genres and time periods. The HTH version tends to be most common in Fantasy and Martial Arts games, the Ranged version in Cyberpunk and Dark Champions games.

VENTRILOQUISM

Type: Intellect Skill (roll: 9 + (INT/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

A character with this Intellect Skill can make his voice sound as if it's coming from somewhere other than himself. Ventriloquism also allows him to speak without apparently moving his lips. It's particularly useful for deception; one of the oldest tricks in the book is for a character to cast his voice behind a gunman, saying "Freeze!" This can distract the gunman enough so the character can try to escape (or can provide an excuse to break the hold of a *Cover* Combat Maneuver).

When a character uses Ventriloquism, he makes his Skill Roll in a Skill Versus Skill Contest against the Hearing PER Roll of anyone who can hear him. Thus, failure doesn't necessarily mean he fails — listeners still have to succeed with their PER Rolls, but that's usually not difficult. If the character fails badly (by 4 or more), then he's obviously trying to throw his voice and doing a miserable job of it; anyone realizes what he's up to without the need for a PER Roll.

Ventriloquism rolls suffer a -1 penalty for every 1" of distance between the ventriloquist and the point where the voice "speaks," with an absolute limit of 20" range in all but the most cinematic of campaigns. A ventriloquist who eats, drinks, or has objects in his mouth while throwing his voice has to make his roll at a -3 penalty to succeed.

EQUIPMENT

Ventriloquism doesn't involve any equipment; it's a purely personal Skill.

POWERS AND VENTRILOQUISM

A character with an appropriately-built Images to Hearing Group power can achieve the same effects as Ventriloquism without the need for a roll... and with the ability to impose penalties on listeners' PER Rolls to boot.

CONSEQUENCES OF FAILURE

See above regarding failed Ventriloquism rolls.

BASE TIMES

Using Ventriloquism typically requires at least a Half Phase Action, but it lasts as long as the character has to keep talking.

VENTRILOQUISM BY GENRE

Ventriloquism works the same in all genres and time periods. According to some sources, the ancient Greeks referred to ventriloquism as *gastromancy,* since it was used by oracles to "speak from the belly."

Pulp Hero

Ventriloquism enjoys great popularity during the Pulp era thanks to the fame of Edgar Bergen (and his dummy Charlie McCarthy). Pulp heroes may be surprised to encounter all sorts of people who've made an effort to learn the Skill to imitate their favorite entertainer!

SUBDIVIDING VENTRILOQUISM

For cinematic campaigns, the GM might consider combining Ventriloquism and Mimicry into a single Intellect Skill, *Voice Manipulation.* This isn't necessarily realistic, but it may encourage characters to buy and use these two fun but relatively uncommon Skills more frequently.



WEAPON FAMILIARITY

Type: Combat Skill (roll: N/A)
Cost: 2 Character Points for the ability to use one category of weapons (if purchaseable), or 1 Character Point for the ability to use one subcategory of weapons

Weapon Familiarity (WF) represents the knowledge of how to use specific weapons. It's used primarily in Heroic campaigns; characters in Superheroic campaigns, who pay Character Points for their weapons, automatically know how to use them (see below).

Weapon Familiarity is bought by category (see the accompanying table on page 349). Large categories that characters may purchase as a group, such as *Common Melee Weapons* or *Small Arms,* cost 2 Character Points; individual categories, such as *Handguns* or *Blades,* cost 1 Character Point each. A character must buy Weapon Familiarity separately for each weapon category in weapon groups he cannot buy as a group. All characters have Familiarity with Clubs, Fist-Loads, Unarmed Combat, and Thrown Rocks for free.

A character fights at -3 OCV when using a weapon for which he does not know the Weapon Familiarity. If a weapon has an inherent OCV or Range Modifier penalty, having the WF for that weapon does not eliminate that penalty.

Example: *Andarra's gun is knocked out of her hand, so she grabs a laser sword off the wall. She doesn't know how to use a laser sword (*i.e., *she didn't pay for WF: Blades), so she suffers a -3 OCV penalty.*

Later on, Andarra gets her gun back. It's not well built, so it has an inherent -1 OCV penalty. She suffers this penalty even though she has WF: Small Arms; the Weapon Familiarity doesn't eliminate the weapon's inherent negative modifier.

A character can buy a WF with whatever the GM is willing to let him define as a "weapon." That eliminates the -3 OCV penalty for Unfamiliar Weapon (*The HERO System 5th Edition, Revised,* page 382), but not any other penalties (such as for the inherent bulkiness or awkwardness of a weapon).

A character who's paid Character Points for a weapon doesn't need a WF to wield it — since he paid points for it, he knows how to use it. However, this doesn't extend to other weapons of that same type. Paying points for a sword doesn't mean a character has WF: Blades — it just gives him the ability to wield that one blade.

A character with WF can perform *basic* maintenance and upkeep on the weapons he knows how to use — things like keeping them clean, sharpening them, and the like. He cannot repair broken weapons, modify or customize the weapon, perform major maintenance, or the like; that requires Weaponsmith.

WEAPON FAMILIARITY CATEGORIES

Common Melee Weapons
(may be purchased as a group)
- Unarmed Combat*
- Axes, Maces, Hammers, and Picks
- Blades
- Clubs*
- Fist-Loads* (1)
- Polearms and Spears (2)
- Two-Handed Weapons

Uncommon Melee Weapons
(must be purchased separately)
- Flails (3)
- Garrote
- Lances
- Nets
- Spread-The-Water Knife
- Staffs
- Whips

Common Martial Arts Melee Weapons
(may be purchased as a group)
- Chain & Rope Weapons
- Karate Weapons
- Mourn Staff
- Ninja Weapons
- Rings
- Staffs
- War Fan

Uncommon Martial Arts Melee Weapons
(must be purchased separately)
- Flying Claw/Guillotine
- Hook Sword
- Kiseru
- Lajatang
- Pendjepit
- Rope Dart
- Three-Section Staff
- Urumi
- Wind and Fire Wheels
- Off Hand (4)

Common Missile Weapons
(may be purchased as a group)
- Thrown Rocks* (5)
- Bows (6)
- Crossbows (7)
- Javelins and Thrown Spears
- Thrown Knives, Axes, and Darts (8)

Uncommon Missile Weapons
(must be purchased separately)
- Arare
- Atlatl
- Blowguns
- Boomerangs and Throwing Clubs
- Early Thrown Grenades
- Fukimi-Bari
- Iron Mandarin Duck
- Metsubishi
- Sling
- Sling Bow
- Staff Sling
- Steel Olive
- Steel Toad
- Thrown Chain & Rope Weapons
- Thrown Sword
- Wishful Steel Ball

Siege Engines
(may be purchased as a group)
- Ballista
- Catapult
- Onager
- Siege Tower
- Spring Engine
- Trebuchet
- Turtle

Early Firearms
(may be purchased as a group)
- Early Muzzleloaders
- Matchlocks
- Wheellocks
- Flintlocks
- Early Percussion Firearms (up to approximately 1850)

Small Arms
(may be purchased as a group)
- Assault Rifles/LMGs
- Handguns
- Rifles
- Shotguns
- Submachine Guns
- Thrown Grenades

Uncommon Modern Weapons
(must be purchased separately)
- Flamethrowers
- Grenade Launchers (9)
- General Purpose/Heavy Machine Guns (10)
- Shoulder-Fired Weapons (11)

Emplaced Weapons
(may be purchased as a group)
- Early Emplaced Weapons (12)
- Anti-Aircraft Guns
- Anti-Tank Guns
- Artillery
- Howitzers
- Mortars
- Recoilless Guns

Vehicle Weapons (13)
(must buy per vehicle)

Notes

* = All characters have this Weapon Familiarity for free

1. Fist-Loads includes brass knuckles, *bagh nakh,* the *yawara,* rocks or rolls of quarters held in the fist, and similar weapons. It also includes tasers that the user must touch to the victim's skin (the type of taser that fires small metal darts requires WF: Small Arms).

2. Polearms and Spears includes the use of Bayonets attached to rifles (Bayonets wielded on their own are considered Blades).

3. Flails includes the flail, the morningstar, and other articulated clubs not listed elsewhere.

4. WF: Off Hand, which costs 1 Character Point and may only be purchased once, is most suitable for martial arts campaigns and some other Heroic games. A character with WF: Off Hand gets a +1 DCV in HTH Combat when fighting with a weapon in each hand. This does not allow the character to attack twice in a Phase, however. To attack more often in a Turn, buy more SPD; to attack more than once in a Phase, use Combat Maneuvers like *Sweep* or *Rapid Fire* or buy the Skill *Two-Weapon Fighting.*)

5. Thrown Rocks includes Molotov cocktails and other crude missile weapons. All characters know this WF for free.

Related to Thrown Rocks are some hand-held dropped weapons, like caltrops, marbles, and the like. Such weapons do not require a WF to use.

6. Bows includes pellet bows/sling bows.

7. Crossbows includes pellet crossbows and the *chu-ko-nu* (Chinese repeating crossbow).

8. Thrown Knives, Axes, and Darts includes shuriken and *chakram.*

9. Grenade Launchers includes both GLs which are separate and those which are a component of another weapon, and also includes rifle grenades. Examples include the U.S. M79 and M203.

10. General Purpose/Heavy Machine Guns includes the U.S. M60, M61A1/M168, M134 Minigun, Vulcan, M249 SAW, and similar weapons. However, if mounted in a vehicle, these weapons usually require a WF: Vehicle Weapon to use.

11. Shoulder-Fired Weapons is a broad category that includes anti-tank weapons (such as the U.S. M20 bazooka, M72 A2, and M47 Dragon), man-portable SAMs (such as the U.S. Stinger or Russian SA-7 Grail), hand-held recoilless guns (such as the Armbrust), and some man-guided missiles (such as TOWs, FOGs, laser-guided missiles, and so forth).

12. Early Emplaced Weapons includes all such weapons developed prior to World War I, such as cannons, bombards, culverins, and early howitzers. The GM may wish to break this category out into several separate categories for campaigns set in periods in which such weapons are commonplace (such as a pirates campaign or Civil War campaign).

13. Vehicle Weapons must be purchased per vehicle (for example, WF: M1A Abrams Weapons, WF: F-15 Weapons), at 1 point per vehicle. Bombs and missiles dropped or launched by aircraft, tank guns, and torpedoes are all examples of Vehicle Weapons. Mines do not require a WF (building and working with them is a function of Demolitions), though vehicle-based minelaying weapons require a Vehicle Weapons WF.

Advanced land-based missile systems and some other weapons are controlled via Systems Operation (*q.v.*), not a WF.

VEHICLE WEAPONS

As noted in the Weapon Familiarity Categories table, a character can buy a WF with *Vehicle Weapons* for any specific type of vehicle (such as an Abrams tank or a Hornet fighter plane) for 1 Character Point. Gamemasters may, if desired, allow characters to buy 2-point WF categories with all types of weapons on all vehicles of a particular type. See the accompanying text box for some examples. Using this system, a character in a Vehicle-oriented campaign can shift from Vehicle to Vehicle without worrying about Unfamiliar Weapon penalties. See Chapter Three for more information on Vehicles and Skills, and *The Ultimate Vehicle* for advanced rules for vehicular combat.

VEHICLE WEAPON FAMILIARITIES

Each of these categories is a 2-point category which may be purchased as a group.

Airplane Weapons
Airplane Guns
Airplane Missiles
Dropped Bombs

Automobile Weapons
Automobile Beam Weapons
Automobile Dropped Weapons
Automobile Grenade Launchers
Automobile Guns
Automobile Incendiary Weapons
Automobile Missiles

Helicopter Weapons
Helicopter Grenade Launchers
Helicopter Guns
Helicopter Missiles
Dropped Bombs

Mecha Weapons
Mecha Beam Weapons
Mecha Guns
Mecha Hand-Held Ranged Weapons
Mecha Hands
Mecha Melee Weapons
Mecha Missiles

Modern Naval Vessel Weapons
Naval Guns
Naval Missiles
Naval Torpedoes

Sailing Ship Weapons
Light Cannons
Medium Cannons
Large Cannons
Ship-Based Siege Weapons

Starship Weapons
Starship Beam Weapons
Starship Guns
Starship Missiles

Submarine Weapons
Submarine-Launched Missiles
Submarine Torpedoes

Tank Weapons
Tank Grenade Launchers
Tank Main Guns
Tank Missiles
Tank Secondary Guns

EQUIPMENT

Except for WF: Unarmed Combat, all Weapon Familiarities involve equipment: the weapon in question. A character doesn't need any other equipment to use a WF, though.

POWERS AND WEAPON FAMILIARITY

In campaigns where characters have innate powers, such as most Superhero and some Fantasy campaigns, Weapon Familiarity may become a relatively rare Skill. There's no need to buy a Skill to use personal powers (unless some Limitation requires that), and no need to use weapons when one has superpowers to substitute. But even in that situation, a character or two may still buy a WF to represent knowledge of how to fire guns, having taken a fencing class in college, or the like.

CONSEQUENCES OF FAILURE

Weapon Familiarity does not involve a Skill Roll.

BASE TIMES

Using a Weapon Familiarity takes no time.

SUBDIVIDING WEAPON FAMILIARITY

As discussed below under *Science Fiction,* in campaigns with multiple sentient humanoid species the GM may want to differentiate Weapon Familiarities by species, so that, for example, Dwarven Blades is a distinct WF from Human Blades or Lizard-Folk Blades.

WEAPON FAMILIARITY BY GENRE

Weapon Familiarity works the same in all genres and eras, though the types of weapons it's commonly bought for can vary greatly. For example, few Dark Champions characters buy WF: Axes/Maces/Hammers/Picks, though that's one of the most common WFs in Fantasy campaigns. Traditional Fantasy characters, on the other hand, can't buy WF: Small Arms because that level and type of technology doesn't exist in typical Fantasy settings.

Pulp

Pilots can buy one WF: Vehicle Weapons, known as *Biplane Weapons,* to use the weapons on any type of biplane, triplane, or the like used during the Pulp era — they don't have to buy them separately for each model of plane because the weaponry is similar enough from plane to plane that one WF covers all. However, using the weapons on late-period monoplanes may require a separate WF, and by the World War II era vehicle-by-vehicle WFs are required.

Science Fiction

The number and types of weapons available to characters is greater in Science Fiction than any other genre, given the panoply of worlds, cultures, and technological levels to choose from. It's not uncommon for characters in a *Star Hero* game to carry everything from clubs, knives, and swords to blasters and disintegrators. See the accompanying table for suggested additions to the WF categories for most Science Fiction campaigns. The GM should alter or add to the existing lists to better suit his specific campaigns.

STAR HERO WEAPON FAMILIARITIES

Uncommon Melee Weapons (add to existing category)
Electric Whip
Energy Blades
Inertial Gloves
Stun Rods

Small Arms (add to existing category)
Liquid-Propellant Rifles
Gauss Guns
Polymer Guns
Rocket Pistols
Rocket Rifles
Missile Guns
Sonic Stunners
Tranquilizer Dart Guns

Beam Weapons (may be purchased as a group)
Laser Pistols
Laser Rifles
Electron Beam Weapons
Particle Guns

Energy Weapons (may be purchased as a group)
Ion Blasters
Plasma Guns
Disintegrators

Alternately, for some campaigns GMs may prefer to establish a *Science Fiction Small Arms* category including all weapons listed in the Small Arms, Beam Weapons, and Energy Weapons categories of this table.

Gamemasters may want to consider making each planet's or species's weapons a separate WF. Thus, a character with WF: Ackálian Common Melee Weapons or WF: Human Small Arms can't use Varanyi Common Melee Weapons or Denebian Small Arms without suffering the normal nonproficiency penalty. Depending on a species's number of limbs or fingers and similar considerations, other species may find it difficult or impossible to use their weapons, regardless of proficiency.

WEAPONSMITH

Type: Intellect Skill (roll: 9 + (INT/5) or less)
Cost: 2 Character Points for a base roll with one category; each additional category costs 1 Character Point

Characters with this Intellect Skill can make, maintain, repair, and install various types of weapons. A character with Weaponsmith can also identify the origin, uses, and effects of any weapon he can make. For example, Weaponsmith: Firearms allows a character to recognize guns by sight or sound, and possibly to identify the origin of a gun.

Weaponsmith does not cover the building of explosives, bombs, and related weapons such as landmines; that requires Demolitions. Nor does it cover the invention of new types of weapons, which requires Inventor in addition to Weaponsmith.

The cost for buying Weaponsmith with one category of weapons is 2 Character Points for a (9+(INT/5)) or less roll. Each additional category costs +1 Character Point. A character may increase his roll in all categories he knows for 2 Character Points for each +1 to the Skill Roll.

Complementary Skills for Weaponsmith vary based on category. Electronics is usually Complementary for Energy Weapons; SS: Ballistics would be Complementary for Firearms or Missiles & Rockets; and several SSs would be Complementary to Chemical or Biological Weapons.

MUSCLE-POWERED WEAPONS

In Fantasy campaigns and some other games, the *Muscle-Powered* subcategories of Weaponsmith are the main ones (possibly the only ones) characters use. The accompanying table lists the modifiers and times required to make a weapon from scratch. This assumes sufficient tools (anvil, hammers,

WEAPONSMITH CATEGORIES

Category	Examples
Muscle-Powered HTH	Swords, knives, axes, maces, polearms, clubs
Muscle-Powered Ranged	Bows, crossbows, javelins, throwing blades
Siege Engines	Ballistae, trebuchet, catapults
Artillery, Early	Cannons, culverins, bombards
Firearms, Early	Matchlocks, flintlocks, wheellocks, and the like up to 1850
Firearms, Advanced	Post-1850 revolvers, pistols, rifles, shotguns, machine guns
Missiles & Rockets	Stingers, Patriots, rocket launchers
Chemical Weapons	Tear gas, nerve gases
Biological Weapons	Bacteriological and virological warfare agents
Incendiary Weapons	Flamethrowers, napalm, thermite, white phosphorus
Artillery, Advanced	Howitzers, mortars
Energy Weapons	Lasers, blasters, magnetic weapons, tasers

carving knives, and the like) and supplies of metal or wood. If a character lacks any of these things, the GM should extend the time required and/or increase the modifier, as appropriate.

Example: *Dougal has Weaponsmith (Swords And Daggers) 13-. He wants to make a long-sword for his friend Drago. The GM rolls a 3, so it will take 11 hours.*

Dougal decides to make Drago a particularly well-balanced sword, one with the "Accurate" feature. That imposes a -2 on his roll and increases the time necessary to 22 hours.

Primitive Wilderness Weapons

Characters lost in the wilderness and deprived of their weapons can use Weaponsmith to make simple substitutes: spears formed from sharpened sticks or a stick tipped with a flint head, flint hand-choppers, bows from flexible branches and animal sinew, and so forth. This typically requires a Weaponsmith roll at -2 (plus the necessary raw materials, of course; Survival may be Complementary). These weapons may not do as much damage or be as accurate as properly-manufactured ones (typically they're -1 DC and -1 OCV), but they're more than adequate in a pinch.

WEAPONSMITHING (MUSCLE-POWERED) TABLE

Type Of Weapon	Modifier	Time Required
Arrow/Bolt	-1	½ hour
Axe	-1	2 + 1d6 hours
Bow	-3	2 + ½d6 hours
Crossbow	-4	3 + 1d6 hours
Dagger	-2	4 + 1d6 hours
Flail	-3	4 + 1d6 h ours
Hammer	-0	1 + ½d6 hours
Lance	-1	2 + ½d6 hours
Mace	-1	2 + 1d6 hours
Pick	-1	2 + ½d6 hours
Polearm	-2	2 + ½d6 hours
Sword	-3	8 + 1d6 hours
Throwing Blade	-2	2 + 1d6 hours

Modifier: The penalty to the Weaponsmith roll needed to successfully construct the weapon. If the character fails the roll, the weapon may still work, but less well — reduce the DCs of damage it can cause by 1 per point by which the character fails the roll.

Time Required: The Base Time needed to make the weapon. The lower end of the range assumes the best tools and facilities, few (if any) interruptions, and perhaps the help of apprentices. The upper end of the range assumes either a lack of these things, or taking extra time to make the weapon as good as possible, add decorative touches, and so forth.

For one-and-a-half-handed weapons, multiply the listed time by 1.2. For two-handed weapons (other than polearms and lances), multiply the listed time by 1.5.

Fine Weapons: For each "fine" or "masterwork" feature, or Advantage, the weaponsmith wants to add to the weapon (see *Fantasy Hero,* page 183), increase the modifier by -2. For the first such feature, multiply the time required by 2; for each additional feature, add .5 to the multiplier.

Poor Weapons: For each "poor" feature, or Limitation, the weaponsmith adds to the weapon (see *Fantasy Hero,* page 184), reduce the modifier by 1 (minimum of -1 for weapons with -3 or -4 modifiers, minimum of -0 otherwise) and the time by half an hour.

FIREARMS

The *Firearms* subcategory of Weaponsmith is as important to modern-day and near future games as Muscle-Powered is to Fantasy. The Weaponsmith (Firearms) Table lists the typical modifiers for various gunsmithing tasks and the time required to perform them. (See *Firearms Modifications And Customization* on page 238 of *Dark Champions* for information on the game effects of many of these modifications.)

The modifiers and times required listed in the Gunsmithing Table assume the character has proper tools (lathes, mills, probes, and the like) and supplies of appropriate parts. If the character doesn't have these things, the GM should extend the time required and/or increase the modifier, as appropriate.

EQUIPMENT

Weaponsmith requires equipment: first, the raw materials needed to manufacture a weapon; second, the forge, workbench, drill presses, and other tools appropriate to the weapon, location, and time period.

POWERS AND WEAPONSMITH

Characters with a properly-defined Transform may not need Weaponsmith — they can Transform the necessary raw materials into a functioning weapon in the blink of an eye.

CONSEQUENCES OF FAILURE

If a Weaponsmith roll fails by 1-3, the attempted creation or installation fails. This is usually obvious upon inspection, test firing, or the like. If it fails badly (by 4 or more), either the weapon itself has been irreparably damaged, or the failure doesn't become apparent until the character uses the weapon in crisis or combat conditions (*i.e.,* it fails to work just when he needs it the most!).

As noted in the accompanying tables, another possibility for failure when a character constructs a weapon is this: the weapon still works, but less well — reduce the DCs of damage it can cause by 1 per point by which the character fails the roll (to a maximum of losing half the weapon's DCs).

BASE TIMES

The accompanying tables above list the Base Times for common Weaponsmith tasks. Identifying a weapon or its effects usually takes no more than a Full Phase, and is often an Action that takes no time.

UNIFYING/SUBDIVIDING WEAPONSMITH

In campaigns that don't involve a lot of work with weapons, the GM may prefer to convert Weaponsmith into a single standard Intellect Skill. For 3 Character Points characters can manufacture any type of weapon by succeeding with

an INT-Based Roll.

For campaigns that feature a lot of melee weapons use (such as most Fantasy games), having two *Muscle-Powered* subcategories for Weaponsmith may make it too easy for characters to do all their own weaponsmithing. For a more detailed version of Weaponsmith (Muscle-Powered HTH and Ranged), use these categories instead (the character still gets one for free when he buys the Skill; additional ones cost 1 Character Point apiece):

Arrows, Bolts, And Darts; Axes And Picks; Bows; Chain And Rope Weapons; Clubs And Staffs; Crossbows; Flails; Javelins And Thrown Spears; Maces And Hammers; Spears And Polearms (includes javelins, lances); Swords And Daggers; Thrown Knives, Axes, And Darts; Miscellaneous Muscle-Powered HTH Weapons; Miscellaneous Muscle-Powered Ranged Weapons

As you can see, these categories are largely based on Weapon Familiarity subcategories; you can easily add other subcategories as desired.

For campaigns that involve a lot of gunplay, having a single *Firearms* subcategory for Weaponsmith may make it too easy for characters to do all their own gunsmithing. For a more detailed version of Weaponsmith (Firearms), use these categories instead (the character still gets one for free when he buys the Skill; additional ones cost 1 Character Point apiece):

Assault Rifles, Machine Guns, Revolvers, Rifles, Semi-Automatic Handguns, Shotguns, Submachine Guns, Vehicle-Mounted Guns

WEAPONSMITH BY GENRE

Weaponsmith works the same from one genre to another, but the types of weapons a character can create (and the tools he uses to create them) change.

Fantasy

Weaponsmith becomes very important in most *Fantasy Hero* games, with their emphasis on armed combat. Typically the only categories that apply are Muscle-Powered HTH and Muscle-Powered Ranged, though a setting with gunpowder would allow for Firearms, and one featuring alchemical firebombs might let characters buy Incendiary Weapons.

Science Fiction

Because lasers, blasters, and the like are so common in *Star Hero* settings, GMs may wish to break out the "Energy Weapons" category of Weaponsmith into two or more categories. The categories listed under "Science Fiction" in the *Weapon Familiarity* description (see above) work well in most settings: Small Arms, Beam Weapons, and Energy Weapons. That way, knowing how to fix a laser may tell a character almost nothing about working on a disintegrator.

WEAPONSMITH (FIREARMS) TABLE

Task	Modifier	Time Required
General maintenance and testing	-0	1d6 x 20 Minutes
Ammunition		
(Re)load empty shell casings		
Standard rounds/shells	-0	1 hour per 20 rounds
Exotic rounds/shells	-3	1 hour per 2 rounds
Create new type of ammo	-6	2d6 weeks, or more
Build a firearm from scratch	-4	1d6 weeks, or more
Magazines		
Expand/extend magazine	-3	1d6 hours
Alter magazine to fit in different gun	-2	½d6 hours
Modify or customize firearm		
Accessory rail	-2	½d6 hours
Ambidextrous Conversion	-2	½d6 hours
Barrel Coating	-2	1d6 hours
Barrel Fluting	-0	1d6 x 20 Minutes
Cryotreatment	-1	1d6 hours
Customizing stock	-2	3d6 hours
Electronic Trigger	-3	1d6 hours
Fine Tuning I	-4	2d6 hours
Fine Tuning II	-6	4d6 hours
Hair Trigger	-3	1d6 hours
Hammer bobbing	-0	1d6 x 20 Minutes
Improved Bedding	-2	½d6 hours
Improved Firing Pin	-3	½d6 hours
Improved Range I	-4	3d6 hours
Improved Range II	-6	1d6 days
Improved Trigger	-2	1d6 hours
Personalization	-1	½d6 hours
Pistol Stock	-1	½d6 hours
Polygonal Rifling	-3	1d6 hours
Rechamber for different caliber	-2	1d6 hours
Recoil compensator	-3	1d6 hours
Replace barrel	-1	½d6 hours
Saw off shotgun barrel	N/A	2d6 Minutes (no roll required)
Silencer, integral	-4	3d6 hours
Size Reduction I	-2	1d6 hours
Size Reduction II	-4	2d6 hours
Streamlining	-2	1d6 hours
Watertight	-3	1d6 hours
Weight Reduction	-1	1d6 hours

Modifier: The penalty to the Weaponsmith roll needed to successfully construct the weapon. If the character fails the roll, the weapon may still work, but less well — reduce the DCs of damage it can cause by 1 per point by which the character fails the roll.

Time Required: The Base Time needed to make the weapon. The lower end of the range assumes the best tools and facilities, few (if any) interruptions, and perhaps the help of assistants. The upper end of the range assumes either a lack of these things, or taking extra time to make the weapon as good as possible, add decorative touches, and so forth.

NEW SKILLS

In case the over sixty *HERO System* Skills described in the first part of this chapter weren't enough for you, here are approximately a dozen more new Skills. All of them are *optional* and require the GM's permission to use.

ARMORSMITH

Type: Agility Skill (roll: 9 + (DEX/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

In most campaigns, creating or repairing metal armors is a function of various Professional Skills — PS: Blacksmith, or perhaps even PS: Armorsmith. However, GMs for games where armor plays an important role and/or frequently needs repair (such as some Low Fantasy campaigns) may wish to establish a separate Skill for this sort of work.

Armorsmith is an Agility Skill costing 3 Character Points for a base (9 + (DEX/5)) roll; each +1 to the roll costs 2 Character Points. It allows a character to manufacture, modify, or repair primarily metal armors such as brigandine, chainmail, or plate armor. (Manufacturing armor made mainly of other substances, such as leather or kevlar, requires an appropriate PS [*Fantasy Hero,* page 93], or a variant of this Skill.) A character with Armorsmithing knows how to manufacture metal armors (including special techniques required to make specific pieces of an overall suit of armor, the tools and facilities needed for armorsmithing, and the like). He knows about prominent (and sometimes not so prominent) armorsmiths and can identify their work based on its quality, style, or special marks.

The accompanying table lists the modifiers and times required to build a suit of metal armor from scratch. This assumes sufficient tools and supplies of metal (see below); if the character lacks these things, the GM should extend the time required and/or increase the modifier, as appropriate. It also assumes the character wants to create a suit of armor to cover the entire body; if not, reduce the time required proportionately.

Example: *Dougal has Armorsmith 13-. He wants to make a light chainmail shirt for his friend Drago. Making an entire suit of chainmail would take 190 + 3d6 hours; the GM decides on 160 + 3d6 because it's light chain, and rolls 12, for a total of 172 hours. The GM rules that the part of the body covered by the chain shirt (the shoulders, chest, and stomach) account for 50% of the body. Therefore, it takes 86 hours (50% of 172) to create the shirt.*

EQUIPMENT

Characters cannot use Armorsmithing without the appropriate equipment: tools such as hammers, drills, and punches; a properly-equipped forge; and the like. Sometimes they can perform minor repairs with just the right tools, but major repairs and any type of armor manufacturing typically requires a forge. (Exceptions include activities like weaving chainmail from pre-drawn wire.) Sufficient raw materials (ore the smith can try down for metal, or ingots of metal) are also required.

ARMORSMITHING TABLE

Type Of Armor	Modifier	Time
Scale Mails		
Brigandine	-1	18 + 3d6 hours
Lamellar (Splint Armor)	-2	20 + 3d6 hours
Banded Mail	-2	50 + 3d6 hours
Chainmails		
Chainmail	-3	190 + 3d6 hours
Double Mail/Bar Mail	-4	200 + 3d6 hours
Reinforced Chainmail	-3	180 + 3d6 hours
Plate Armors		
Plate And Chain	-4	170 + 3d6 hours
Plate Armor	-4	150 + 3d6 hours
Field Plate Armor	-4	160 + 3d6 hours
Full Plate Armor	-5	170 + 3d6 hours

Modifier: The penalty to the Armorsmithing roll needed to successfully construct the suit of armor. If the character fails the roll, the armor may still work, but less well — reduce the DEF it provides by 1 per point by which the character failed the roll.

Time: The amount of time needed to make the armor. The lower end of the range assumes the best tools and facilities, few (if any) interruptions, and perhaps the help of apprentices. The upper end of the range assumes either a lack of these things, or taking extra time to make the armor as strong as possible, add decorative touches, and so forth.

If a character only wants to make repairs to armor, as opposed to manufacturing it from scratch, he should divide the base time needed to make the armor by 3 times the DEF it provides. Fixing each major hole in the armor takes that much time. (See *Fantasy Hero,* page 198, for armor breakage rules.) For example, repairing the damage to a suit of field plate armor takes (160/(7x3) = 7.6) 8 hours for each major hole. The GM can adjust the time required based on the extent of the damage, the nature of the armor, and the like.

POWERS AND ARMORSMITH

Characters could use an appropriate Transform-based ability (such as a "Spell Of Armor Creation") to substitute for this Skill.

CONSEQUENCES OF FAILURE

Typically a failed Armorsmith roll means the character didn't make a proper suit or piece of armor, and he knows it. He can melt it back down for raw materials and try again subject to the standard rules for that. A bad failure (by 4 or more) means the piece of armor he made *looks* and *feels* sturdy, but in fact will fall to pieces after a few hits.

BASE TIMES

The Armorsmithing Table indicates the standard times required to manufacture or repair different types of armor.

SUBDIVIDING ARMORSMITH

For campaigns where creating and repairing armor are an important aspect of game play, the GM can break Armorsmith down into categories: Leather Armors; Scale Armors; Chainmails; Plate Armors. (Note that this version does allow the inclusion of non-metal armor categories.) Characters pay 2 Character Points for a DEX-Based roll with one category (subcategories such as Brigandine or Field Plate Armor cost 1 Character Point each); each additional category costs +1 Character Point.

ARMORSMITH BY GENRE

Armorsmith is generally only found in the Fantasy genre. However, hobbyists and antiquarians in more modern time periods may learn it for fun. Modern body armors are manufactured by machines, so characters don't need a Skill to make them (just the appropriate Skills for operating the machinery, and the raw materials).

DIVINATION

Type: Intellect Skill (roll: 9 + (INT/5) or less)
Cost: 3 Character Points for a base roll with one primary and two secondary methods of divination (see text), +1 to the roll per +2 Character Points, +1 additional primary method of divination for each +1 Character Point, +1 secondary method of divination for ½ Character Point

This optional new Intellect Skill represents a character's ability to foretell or foresee the future — typically the future as it pertains to a specific person or question, but sometimes generally. Divination is only appropriate for *Fantasy Hero* campaigns and other games where magic and mystical forces actually exist; in other games it's nothing but charlatanry better represented by a simple Professional Skill.

A character with Divination knows how to foresee or predict the future based on using one or more methods (see below). He can also recognize other methods used for fortunetelling, and knows about other oracular practices, belief systems, and abilities generally.

BUYING DIVINATION

The base cost of Divination is 3 Character Points, like any other Intellect Skill. For that cost a character knows one *primary method* of Divination and two *secondary methods* of Divination, representing the ways of foreseeing or predicting the future he's most comfortable using. For each +1 Character Point he can purchase +1 primary method (which might involve "upgrading" a previously-chosen secondary method, or learning an entirely new method). For each ½ Character Point he can purchase +1 secondary method (since the minimum cost of anything in the *HERO System* is 1 point, the character should either always choose two additional secondary methods or, with the GM's permission, should buy something else costing ½ Character Point to keep things balanced).

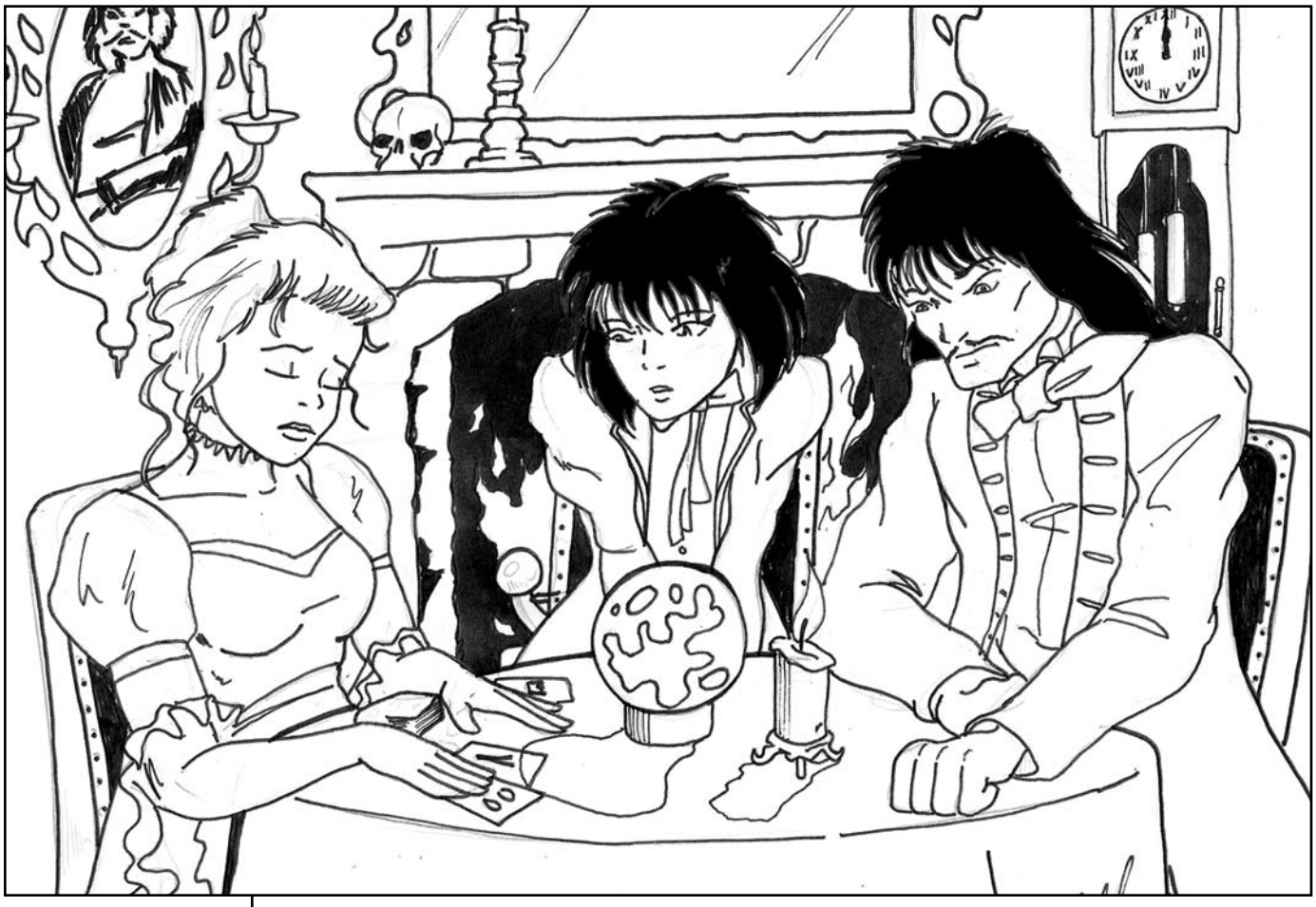
USING DIVINATION

Using Divination typically requires at least 1 Turn, and often much longer. It all depends on the method of divination used, the difficulty of the question the character wants to answer, and other such factors.

To use Divination, the character must have a question to answer. Usually this question is a fairly specific one asked by a client or petitioner (such as, "Who will I marry?", "Will I win the battle tomorrow?", or "Will this business venture succeed?"). However, the question can be more general — the client may simply seek to know the overall course of his life in the days to come, or may want to know how he should conduct himself generally (for example, "Should I avoid sea voyages?").

Method Used

When a character uses Divination, he must select the method to use. If he uses any of his primary methods, he suffers no penalty to the roll. If



he uses any of his secondary methods, he suffers a -2 penalty to the roll. If he uses any other method that's neither a primary nor secondary method for him, he suffers a -4 (or greater) penalty. At the GM's option, if the method chosen relates to the question asked (such as using Geomancy to try to determine the best location for a new mine), the character receives a +0 or greater bonus.

Timeframe

The other main modifier for a Divination roll concerns the timeframe involved. A character can use Divination to answer any question concerning matters that will take place within 1 Day at no penalty. For each step down the Time Chart beyond that, the roll suffers a -2 cumulative penalty (see the Divination Modifiers table). Thus, predicting the distant future is possible, but difficult.

DIVINATION MODIFIERS

Circumstance	Modifier
Method Used	
Primary method	N/A
Secondary method	-2
Any other method	-4 or greater
Method relates to question asked	+0 or more
Timeframe	
Within 1 Day	-0
2 Days to 1 Week	-2
8 Days to 1 Month	-4
31 Days to 90 Days (1 Season)	-6
91 Days to 1 Year	-8
...and so on	

SUCCESS AND FAILURE

If a character's Divination roll succeeds, he learns the answer to the question asked of him — the more the roll succeeds by, the greater the accuracy of his foresight. But even the most precise and accurate oracular answers tend to be indirect, full of allusions, and subject to multiple interpretations. Rarely do the fates answer outright... and even when they do, the questioner often lacks the wisdom to listen to them. In short, the GM should provide an answer that legitimately responds to the question, but without simply revealing valuable information to the players — the answer should be a dramatic element within the story being told. However, since the character has paid Character Points for the Skill, it's only fair to occasionally provide hints and other helpful interpretations so that he derives some actual benefit from Divination.

Example: *Hieronymus the Seer wants to answer the soldier Baramore's question: "Will I die in tomorrow's battle?" He makes his preparations to use astragalomancy (his primary method of divination) by laying out a panther-skin and lighting candles around it. Then he picks up his special leather bag of bones, pours the bones into his hand, shuts his eyes, and tosses them onto the panther-skin. Interpreting the results, he describes his vision to the soldier: "The eagle who soars looks proudly down upon his foes, but exposes himself to the hunter's arrow. Fight with valor and fame shall be yours, but a Ventati spear will find your side." That vision could*

be interpreted in many ways. Will Baramore automatically fight with valor, or is Hieronymus giving him the choice to try to distinguish himself (and risk death) or fight with his usual caution (and preserve his life at the cost of doing nothing noteworthy)? If a Ventati warrior spears him, does that automatically mean he'll die? Baramore has much to think about!

If a character's Divination roll fails, two results are possible. For most failures (failure by 1 to 3 points), the character simply can't see an answer to the question. His foresight fails him, the future is cloudy, or something blocks his oracular powers. Worse failure (by 4 or more) often means a *wrong* prediction — the character sees something that definitely won't come to pass, or significantly misinterprets what he does see.

DIVINATION METHODS

As noted above, characters with Divination must choose the methods they want to use to answer a particular question. Here's a list they can choose from, or the GM can create additional methods.

These divination methods all really exist. A few of the more obscure divinatory techniques may suggest interesting special effects for magic — or at least provide names for schools of Fantasy magic.

Aeromancy: Divination by atmospheric phenomena. Related types of divination include *Austromancy* (divination by the winds), *Nephomancy* (divination by clouds), and *Ceraunoscopy* (divination from thunder and lightning).

Alectryomancy: Divination by how a rooster (or sometimes another bird or birds) pecks at grain the seer has scattered on the ground. In some versions a tethered bird pecks at grains associated with letters of the alphabet. Also spelled *Alectoromancy* or *Alectomancy.*

Aleuromancy: Divination from flour. The diviner selects balls of dough containing prophetic messages. This is how the fortune cookie originated.

Alomancy: Divination by salt — the seer casts salt crystals into the air and interprets the patterns as they fall and land on the ground.

Anthropomancy: Divination by the entrails of a human sacrifice. One or two of the later and weirder Roman emperors used this. See also *Haruspicy.*

Apantomancy: Divination using random articles at hand or whatever objects happen to be available.

Ariolism: Divination using an altar.

Aspidomancy: Divination using a shield. The diviner enters a trance while sitting on a shield, within a magic circle, and while entranced utters prophecies.

Astragalomancy: Divination using dice (originally knucklebones, or *astragals* in Greek) or by "casting the bones." Also called *Cleromancy.*

Astrology: Reading a person's future, and giving him advice, based on the positions and movements of the stars and planets. Known more rarely as *Astromancy,* this is one of the most common and popular forms of divination today, still followed (albeit crudely) by millions of people who read their horoscopes in the newspaper every day.

Axinomancy: Divination using an axe. Some methods involving throwing the axe into the ground, a tree, or some other target and interpreting the quivering of the blade or the direction the handle points; other methods involve heating the axehead and reading the colors and patterns. Another method is to put a spherical piece of agate on the edge of the upright blade and interpreting the way it rolls.

Belomancy: Divination by arrows. Arrows are marked with possible responses, and the one that flies the furthest, or that's chosen at random from a quiver, indicates the correct answer.

Bibliomancy: Divination by opening a book at random and sticking a finger in. Usually done with the Bible, *the* Book. The sentence you touch supposedly answers your question. Also called *Libromancy* or *Stichomancy,* and it makes a great party game. *Rhapsodomancy* does the same thing but uses poetry.

Botanomancy: Divination by plants. Related types of divination include *Xylomancy* (divination by wooden twigs) and *Phyllorhodomancy* (divination using rose leaves).

Capnomancy: Divination by smoke.

Captromancy: Divination from the fumes of poppy seeds thrown on hot coals.

Cartomancy: Divination by cards — the good old Tarot reading (sometimes more specifically referred to as *Taromancy*). The Tarot cards are great for made-up magic because they have so much symbolism built in.

Casting The Bones: See *Astragalomancy.*

Catoptromancy: Divination by mirrors (using a mirror instead of a crystal ball).

Causimomancy: Divination by fire. If objects thrown in a fire doesn't burn, it's a good omen.

Causinomancy: Divination by onions placed on an altar at Christmas Eve.

Cephalomancy: Divination using a goat's or a donkey's head (or, more generally, any head or skull).

Ceromancy: Divination by the shapes formed from dripping wax. A related type of divination is *molybdomancy,* interpreting the shapes formed by dripping molten lead into water; and *tiromancy,* divination by cheese curds.

Cheiromancy: Telling a person's fortune by reading his palm (also called *Palmistry*). *Padomancy* (reading the soles of a person's feet) and *Metoposcopy* (reading the lines on the forehead) are similar.

Clidomancy: Divination by keys (also spelled *Cleidomancy*). Typically the key is suspended somehow, and the way it swings or spins indicates the answer. *Dactylomancy,* using a finger-ring, works similarly.

Cometomancy: Divination by comets' tails.

Critomancy: Divination by flour sprinkled over a sacrificial victim.

Cromniomancy: Divination by onions placed on an altar; the way the onions sprout answers the question.

Crystallomancy: The old crystal ball trick, also called *scrying.* Other scrying tools include bowls of water, ordinary mirrors, black mirrors, jewels, a pool of ink cupped in the palm, or a polished seed. *Elaeomancy* is the general term for divination by watching the surface of a liquid.

Cubomancy: Divination using thimbles.

Cyclomancy: Divination by interpreting a spinning object (often a wheel). Often used to determine direction — the way the spinning object points when it stops shows the way to go.

Daphnomancy: Divination from the way a laurel branch or wreath burns.

Eromancy: Divination by exposing objects to the air.

Favomancy: Divination by beans, similar to Astragalomancy.

Gastomancy: Divination by the rumbling of a person's stomach.

Geloscopy: Divination from a person's laughter.

Geomancy: Interpreting the designs formed by tossing a handful of earth into a circle — in particular, looking for certain patterns of dots which geomancers have given special Latin names. There are many variations, including *Halomancy* (using salt instead of dirt) and *Tasseography* (tea leaf reading).

Gyromancy: A form of divination that involves walking (or stumbling dizzily) around a chalked circle.

Haruspicy: Divination by the entrails of a sacrificed animal. The kinks and blotches of the intestines gave messages from the gods. *Armomancy* is a form of Haruspicy using the shoulders or shoulderblades of a sacrificed animal (see also *Scapulomancy*), and *Hepatoscopy* is divination involving the animal's liver.

Hippomancy: Divination from a horse — either its pace, or the way it neighs and whinnies.

Hydromancy: A scrying technique using water. A possibly related type of divination is *Pegomancy,* divination by fountains. (See *Crystallomancy.*)

Iatromancy: A general term for seeking the cure to an illness via dreams.

Ichthyomancy: Divination by fish.

Lampadomancy: Divination using an oil lamp's or torch's flame.

Lecanomancy: Divination by determining the ripples or patterns formed by dropping stones, hot oil, or the like into a basin of water.

Libanomancy: Divination from incense smoke. Also called *Turifumy.*

Literomancy: Divination by the letters (or other written characters) in a name or word.

Lithomancy: Divination by precious stones, either by scrying or as a geomantic technique. A subtype of Lithomancy is *Margaritomancy,* divination by means of a pearl.

Metagnomy: Divination by means of visions. The character concentrates on the questions put to him and begins receiving psychic visions of the answer. This may require meditation or other methods of instilling a "trance" or similar state of consciousness in which the visions can occur.

Meteormancy: Divination by meteors.

Moleosophy: Telling a person's character by the moles on his body.

Myomancy: Divination by the behavior of rats, mice, or other rodents.

Necyomancy: Divination by inspecting the nerves of a corpse.

Nggàm: An African method of divination by interpreting the actions and movements of spiders or crabs. (Perhaps the English equivalent would be *Arachnomancy.*)

Numerology: Reading a person's character (and sometimes fortune) or determining other facts through mystic numerical analysis. Also called *Arithmancy.*

Oculomancy: Divination by gazing into the questioner's eyes.

Oinomancy: Divination by interpreting the patterns formed by spilled or poured wine.

Ololygmancy: Seeking oracles in the howling of dogs.

Omphalomancy: Divination by examining the navel or the umbilical cord.

Oneiromancy: Interpreting dreams for omens.

Onomancy: Divination from the letters in a person's name.

Onychomancy: Divination from reflected sunlight. In some traditions this specifically means the reflections of sunlight on the oiled fingernails of a young boy.

Ooscopy: Divination by watching how eggs break when placed in a fire (also called *Ovomancy* or *Oomantia*).

Ophiomancy: Divination by serpents.

Ornithomancy: Divination by the flight of birds. Also called *Orniscopy.*

Osteomancy: Divination by bones — typically by heating them and interpreting the resulting cracks and marks.

Petchimancy: Divination by brushing clothes.

Plastromancy: Divination using the *plastron,* or undershell, of a turtle.

Pyromancy: Divination by fire, either scrying or throwing tokens into a fire and interpreting how they burn. See also Lampadomancy.

Rhabdomancy: The famous divining rod, used to find liquids, minerals, or metals underground. (In this case Divination is only used to answer one question: "Are there liquids, minerals, or metals in the ground beneath me?".) Also called *dowsing.*

Runecasting: Divination by random selection of rune-carved twigs or stones scattered on a surface.

Scapulomancy: Divination using the shoulder-bones of an animal, sometimes by heating it and interpreting the cracks or markings left by the fire. The Scottish version, *Slinneanachd,* sometimes involved having to first eat the animal's flesh without touching the bone with either nails or teeth.

Scatomancy: Divination by animal droppings.

Sciomancy: Divination by shadows or ghosts ("shades").

Sideromancy: Divination by burning straw.

Sphondulaomancy: Divination by spindles.

Spodomancy: Divination by ashes. Also called *Tephromancy.*

Stolisomancy: Divination by "reading" the way a person dresses.

Taghairm: A Celtic method of seeking oracles. The seer wraps himself in the hide of a freshly-killed bull and sits near a waterfall or precipice, waiting for the spirits to show him the future or answer the question that was put to him. (The term can also refer to a ritual in which cats are burned alive to summon the Devil or devils.)

Tasseography: Divination by reading tea leaves (or sometimes coffee grounds); see *Geomancy.*

Theomancy: Divination by oracles or persons possessed by gods.

Zoomancy: Divination by the behavior of animals. Many specialties exist, such as *Ophiomancy* and *Myomancy* (see above).

EQUIPMENT

The divination method used indicates the type of equipment required. For example, Sideromancy requires some straw and the means to burn it, Ophiomancy some serpents, and Cartomancy a deck of cards.

POWERS AND DIVINATION

Precognitive Clairsentience is the Power equivalent of Divination, though it uses somewhat different rules (for example, the time penalties are more severe, if applied). If a campaign allows characters to buy Divination, then abilities built with Precognitive Clairsentience should generally be easier to use and more reliable — otherwise there's no reason to have both.

Many other Powers and abilities, such as Danger Sense or (Combat) Skill Levels, can represent facets of a character's ability to foresee or predict future events. See the *Precognition Powers* sections of *The UNTIL Superpowers Databases* for numerous examples.

BASE TIMES

As mentioned above, the minimum time for using Divination is 1 Turn. The actual time involved largely depends on the method used. Reading someone's leftover tea leaves may take just the 1 Turn, but sacrificing an animal, roasting its flesh, and then burning its shoulder-bones to interpret the heat-cracks could require hours. To encourage characters to choose more unusual or time-consuming methods of divination, the GM might rule that the more elaborate methods are more accurate (+1 or more to rolls).

UNIFYING DIVINATION

For some cinematic campaigns, the need to choose primary and secondary methods of divination isn't appropriate. In such games a character with Divination can use any method at no penalty, though he usually has one or two that he prefers.

DIVINATION BY GENRE

Generally speaking, Divination functions the same in game terms in all genres, but as mentioned above it only truly works in genres/settings where magic exists.

Cyberpunk/Near Future

If magic exists in your *Cyber Hero* setting, seers might depend on *Cybermancy* — divination by various computer-based systems. Sometimes this involves a traditional method (such as tarot cards, astrology charts, or the *I Ching*) programmed into the computer, but it's possible that characters could devise entirely original ways of having a computer generate random numbers or words that a seer could interpret.

FEINT

Type: Agility Skill (roll: 9 + (DEX/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

This optional new Agility Skill allows characters to trick or outmaneuver their opponents in HTH Combat, thereby obtaining a short-term advantage in the fight. It's most commonly used in armed HTH Combat, such as swordfights, but also applies to unarmed combat.

Using Feint requires a Half Phase Action. If a character's Skill Roll succeeds, his opponent automatically gets to make a PER Roll or Feint roll (opponent's choice) in a Skill Versus Skill Contest. (The GM can allow the use of other appropriate Skills, such as a Knowledge Skill of the fighting style the character's using or a relevant Analyze.) If the opponent wins the Contest, the character gains no benefit from Feint. If the character wins the Contest, he obtains a +1 OCV bonus for his next attack. (This might increase to a +2 if the character's roll succeeded by half or was a Critical Success.) He must use that bonus for his very next attack (either in the same Phase or his next Phase) and must make that attack against the opponent he engaged in the Skill Versus Skill Contest with. If he attacks anyone else or doesn't make an attack as his next Action, he loses the bonus. (However, at the GM's option the character could perform a Zero Phase Action or Action that takes no time before making the attack that gets the bonus.)

At the GM's option, the character can use Feint in a different way: as a Complementary Skill to his HTH Combat Attack Roll. If so, any bonus obtained is subject to the rules above. Since this can provide a significantly higher bonus than the standard use, the GM may rule that it takes a Full Phase Action instead of just a Half Phase. Also at the GM's option, a character using the standard rules for Feint may receive Complementary Skill-like bonuses to his OCV if he makes the Skill Roll by a greater degree (*i.e.,* a +1 OCV bonus if he makes the roll exactly, with an additional +1 OCV for every 2 points he makes the roll by).

REPEATED USE

Using Feint becomes progressively more difficult against the same opponent as he learns to see through the character's tricks. Each time after the first a character uses Feint against a particular opponent in a combat, he suffers a cumulative -2 penalty to his roll. At the GM's option, the opponent may receive a +1 bonus to his PER Roll in later combats because he remembers some of the character's moves. Thus, sooner or later a recurring enemy learns how to avoid the character's tricks. (The GM may cancel this bonus if the character improves his Feint technique, *i.e.,* buys up his Feint roll.) Other characters who have watched the character fight, or who make the character's Reputation roll, may also know of his tricks, thus earning the same bonus even if this is the first time he's ever fought them.

FEINT IN RANGED COMBAT

Ordinarily Feint only applies in HTH Combat. At the GM's option, characters can also use it in Ranged Combat. This might simulate firing an extra shot to lure or force the target into position for the killing shot, particularly careful aiming, or the like.

EQUIPMENT

Feint doesn't require any equipment *per se,* but is often performed with weapons attacks.

POWERS AND FEINT

If the GM doesn't want to allow Feint as a Skill, characters can achieve much the same result by buying appropriate Combat Skill Levels with Limitations like *Requires A DEX Roll* and *Extra Time* (always requires a Half Phase Action to use; -¼).

CONSEQUENCES OF FAILURE

A Feint roll that fails by 1 to 3 points means nothing, except that the character's wasted a Half Phase Action. A badly failed roll (by 4 or more) means the character's actually put himself in a worse position as the result of his failure — if his opponent's next Action is an attack against him, that attack receives a +1 OCV bonus. If the opponent does anything other than attack the character in HTH Combat on his next Action, as described above, he loses this bonus.

If a character fails his Feint roll, and his opponent makes a PER Roll at -2, the character suffer a -2 OCV penalty on his attack, since his target has seen through the "feint" and knows what to expect.

BASE TIMES

Using Feint requires a Half Phase Action, as discussed above.

SKILL SUBDIVISIONS

If the GM thinks that allowing characters to Feint with any HTH Combat attack is too broad and unbalancing, he should require characters to buy Feint the same way they have to buy Fast Draw: by Weapon Familiarity categories (with "Barehanded" counting as a single category for unarmed attacks). Thus, a character with Feint (Blades) can't trick opponents when he's in a fistfight or wielding a spear.

FEINT BY GENRE

Feint works the same in all genres, though it's most common in Fantasy, Martial Arts, Swashbuckling, and other genres that emphasize HTH Combat (especially armed HTH Combat).

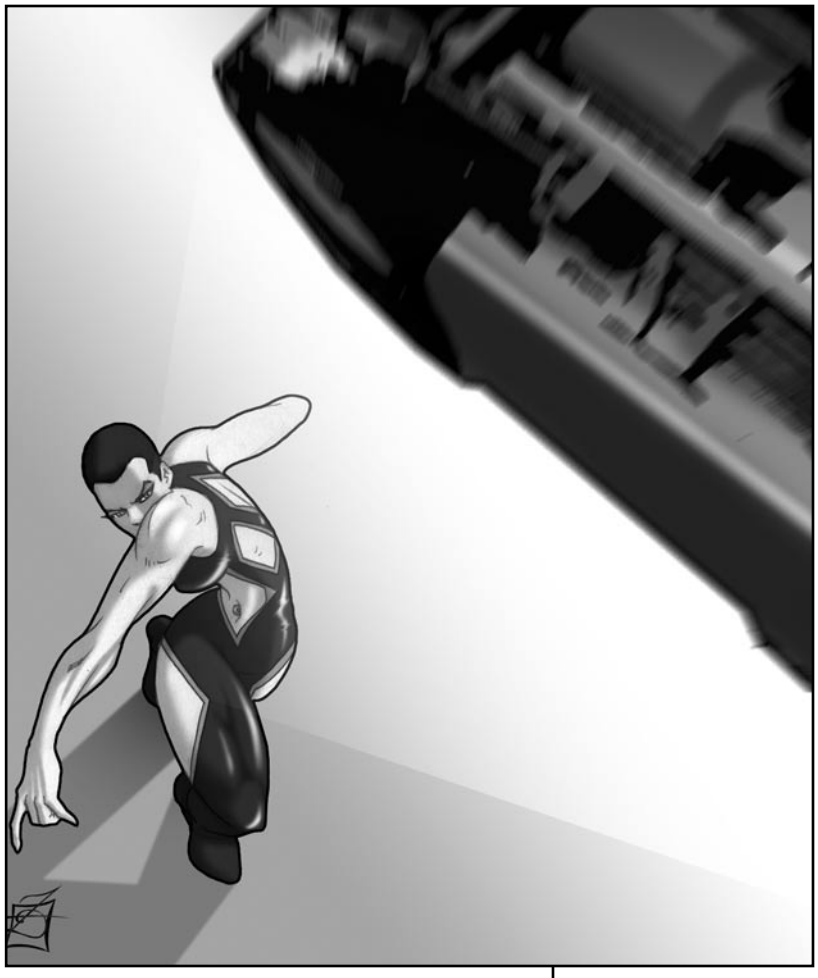
HOIST

Type: Intellect Skill (roll: 9 + (INT/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

This Intellect Skill allows a character to determine the best way to lift heavy objects. This has two effects. First, in appropriate situations a successful roll may temporarily increase the character's STR for purposes of this particular lifting task (or, at the GM's option, for tasks involving moving or shifting heavy objects). This simulates the character figuring out the most effective way to lift the object, the character somehow obtaining improved leverage, or the like. The GM determines if the character can use Hoist this way in a given situation; it may not always be possible. If the GM allows it, the character's STR for purposes of that lifting task increases as follows: if the roll succeeds exactly, by +1 point; if it succeeds by 1-2, by +2 points; if it succeeds by 3-4, +3 points; if it succeeds by half, +4 points; if it's a Critical Success, +5 points. If the roll fails, the character gains no extra STR; if it fails badly (by 4 or more), reduce his STR by 1 point for every 2 full points the roll fails by.

Second, a character can make a Hoist roll to determine the best way to lift a large object without breaking or damaging it. This most often applies in campaigns using the "realistic" lifting rules on page 115 of *The Ultimate Brick*. For each point by which a character makes his Hoist roll, he can reduce the BODY damage an object suffers due to weight stress by 5. He can spread these "damage prevention points" out however he pleases — he can use them all at once as soon as the object starts to break, or he can use some in one Phase, and others in later Segments. (Since stress damage applies per Segment, the GM should allow the character to allocate Hoist damage prevention points even in Segments when he doesn't have a Phase.) If the roll fails badly, the character can't reduce the BODY damage at all; if it fails badly (by 4 or more), the GM should increase the damage by 10% per point by which the roll failed.

Example: *Ironclad has Hoist 18-. He picks up a building to keep it from collapsing on some schoolchildren. Due to weight stress, the building suffers 14 BODY damage when he picks it up, and starts to break apart. Ironclad makes a Hoist roll and rolls a 13. That gives him "25 BODY" worth of weight stress damage he can prevent. He uses 14 of the 25 immediately so the building won't break. In the next Segment, when Ironclad doesn't have a Phase, the building takes another 8 BODY damage. Ironclad allocates 8 of his remaining "11 BODY" to keep the building intact. Now he's only got "3 BODY" of damage prevention left. Hopefully the rest of the Champions will get the kids out of harm's way soon, because he can't hold the building together much longer....*



EQUIPMENT

Hoist doesn't require equipment; it's a purely personal Skill.

POWERS AND HOIST

Characters cannot use Hoist with Telekinesis (unless the GM chooses to permit this).

CONSEQUENCES OF FAILURE

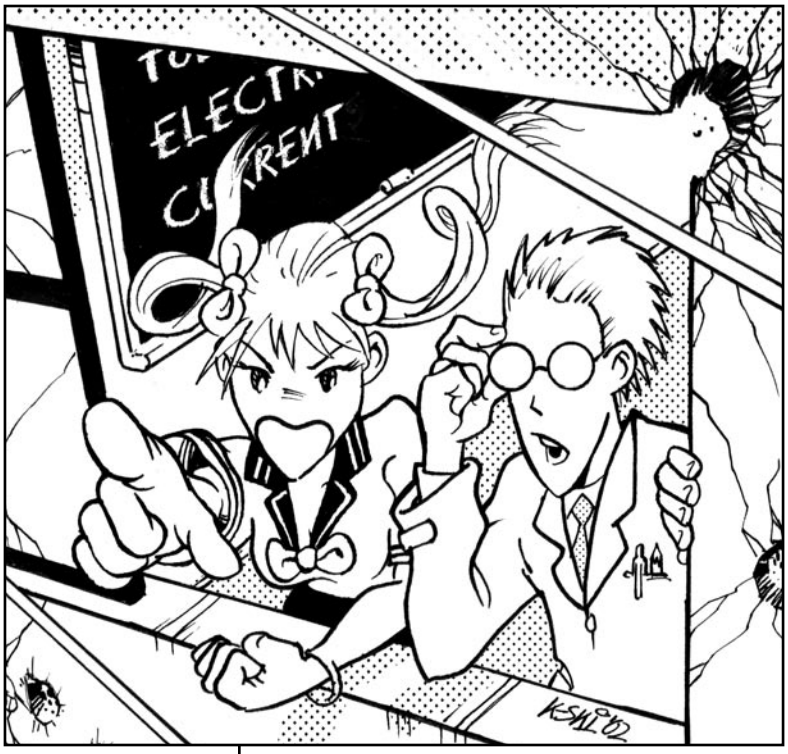
See above regarding the consequences of failing a Hoist roll.

BASE TIMES

Using Hoist typically requires a Full Phase Action prior to doing the actual lifting.

HOIST BY GENRE

Hoist works the same in all genres. It's most appropriate (or at least most common) in the Superheroes genre and other games where characters can have enormous amounts of STR — 30 points or more. In other genres characters can typically only use the first function of the Skill since they don't have the STR to lift large objects on their own.



INSTRUCTOR

Type: Intellect Skill (roll: 9 + (INTHAR/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

This Intellect Skill represents a character's ability to convey information to others in an efficient manner that makes it as easy to learn as possible — in short, his skill as a teacher. A character with Instructor knows about different methods of teaching people,

In game terms, Instructor is used with the rules for learning Skills (see page 26). That section details the various ways characters employ it to teach or learn from another character. See that section for detailed rules regarding Instructor.

OTHER SKILLS

If a character uses Instructor to teach a character who has the Skill *Cramming,* at the GM's option this reduces the time needed to learn something by 10%. For instruction that involves a lot of reading, the *Speed Reading* Talent provides a 10% reduction as well; both reductions can apply to the same learning process.

MUSICAL INSTRUMENT FAMILIARITY

Type: Background Skill (roll: see text)
Cost: 2 Character Points for a base 11- roll with playing the instruments in a single category; +2 Character Points for each additional category of instruments; +1 to the roll with all instruments the character knows how to play per +1 Character Point; increase the Skill Roll with all instruments the character knows how to play to a DEX-Based Roll for +1 Character Point

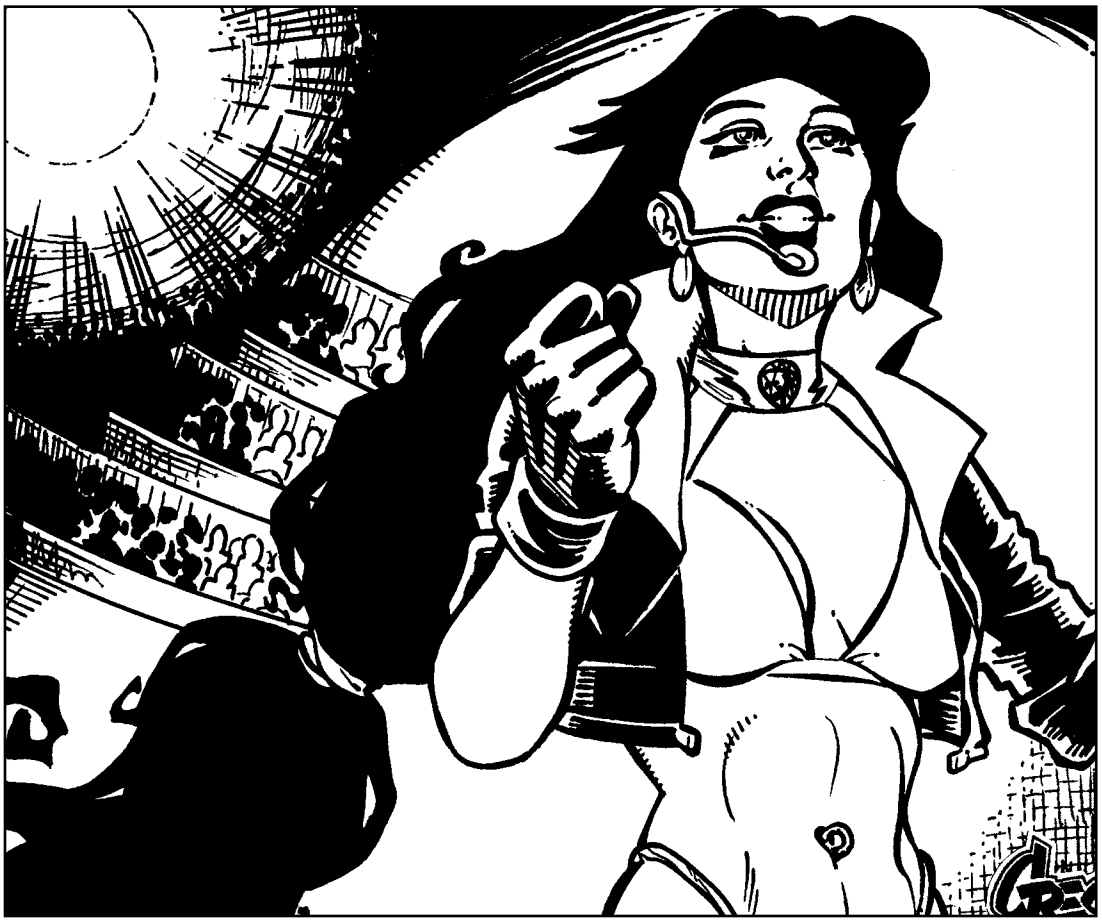
Musical Instrument Familiarity ("MIF") is the skill of playing musical instruments. It organizes the musical instruments of the world based on the standard Hornbostel-Sachs classification system.

A character may spend 2 Character Points to know how to play all instruments in any one of four major categories:

MUSICAL INSTRUMENT FAMILIARITY CATEGORIES

Aerophones
Accordians
Bagpipes
Brass Aerophones (bugles, saxophones, trombones, trumpets, tubas)
Bullroarers
Flutes (end-blown, side-blown, piccolos, recorders, syrinxes)
Horns (English, French, other)
Shawms
Whistles
Woodwind Aerophones (bassoons, clarinets, oboes)
Chordophones
Harps (angle harps, bow harps, frame harps)
Lutes, Bowed (viol, viola, violin, cello, double bass)
Lutes, Plucked (balalaika, banjo, cittern, guitar, mandolin, Renassance lute, sitar)
Lyres (bowed lyres, bowl lyres, box lyres, plucked lyres)
Pianos (Keyboard Zithers) (piano, clavichord, harpsichord, spinet, organ*)
Zithers (aeolian harp, autoharp, dulcimer, Appalachian dulcimer)
Idiophones
Bells
Clappers
Cymbals
Friction Instruments (musical saw, rubbed glasses, and so forth)
Gongs
Rattles
Triangles
Xylophones
Membranophones (this category includes only drums, of many sorts, and so has no subcategories)
Miscellaneous (may not be bought as a group)
Hurdy-Gurdy
Steel Guitar
Synthesizer
Theremin

*: An organ is actually an aerophone, but it's played more like a piano than like any aerophone, and so is grouped with the pianos.



Aerophones (instruments that produce sound with air vibrations)

Chordophones (instruments that produce sound via the vibration of strings)

Idiophones (instruments that produce sound through concussion — when hit or banged together)

Membranophones (instruments that produce sound when a membrane is struck or touched)

Each additional category after the first costs another 2 Character Points. A character may also spend 1 Character Point to know how to play an individual instrument or subcategory listed beneath a category; this is the only way to learn any of the instruments in the "Miscellaneous" category.

When a character purchases an MIF, he gains an 11- roll with playing the instrument(s). For +1 Character Point, he can increase that to a DEX-Based roll with all the instruments he knows how to play. Additional +1 increases to the roll cost +1 Character Point each with all instruments.

Buying a MIF gives a character both the ability to play the instrument(s) in question and to read music for them. To compose music, the character must also have PS: Compose Music, which allows him to write music for any instrument he has an MIF for. (Alternately, the GM might have characters buy Inventor, retitled *Composer,* as the Skill for creating songs and musical compositions.)

If the GM doesn't want to establish Musical Instrument Familiarity as a separate Skill, he can allow characters to use this description as guidelines for buying musical Professional Skills. For example, a character could buy PS: Play Aerophones or PS: Play Flutes.

EQUIPMENT

MIFs don't require any equipment *per se,* but of course a character has to have an instrument to play it. If the instrument requires special equipment to play (such as the bow for playing a violin), the character must have that as well.

POWERS AND MUSICAL INSTRUMENT FAMILIARITY

A character with an appropriate Hearing Group Images power might be able to produce beautiful music without the need for any instrument. He would need PS: Read Music to know how to read music and reproduce it exactly with his Images, and PS: Compose Music to create original worthwhile pieces of music.

CONSEQUENCES OF FAILURE

A failed MIF roll typically means the character either can't play a particular piece of music or at best plays it badly. A badly-failed roll (by 4 or more) usually means he plays so badly that he damages the instrument or leaves a lasting impression of his poor musicianship with listeners (and thus harms his reputation as a musician).

BASE TIMES

The base time to use MIF depends on the length of the piece of music being played. A simple tune may take no more than 1 Minute; some complex compositions go on for many hours.

OTHER MUSIC SKILLS

In addition to MIFs, some other Skills that musically-oriented characters might buy include:

KS: Music History And Theory: Knowledge of the history of music, musical background information (scales, keys, and so forth), how music is composed and performed, famous composers and compositions, and the like. Characters can buy more detailed information about specific types of music if desired — KS: Rock And Roll, KS: Classical Music, KS: Opera, KS: Country And Western Music, and so forth.

PS: Compose Music: Allows the character to write music for any instrument he has an MIF for (see text).

PS: Singer: The ability to earn a living as a singer. A character with this PS knows how to negotiate pay rates (and what a fair rate is), what's involved in signing a recording deal, how to record sung music, how best to arrange performance, and so on. The equivalent for a character who plays an instrument would be *PS: Musician* (or something more specific like PS: Guitarist or PS: Flutist).

PS: Singing: The ability to sing well.

MUSICAL INSTRUMENT FAMILIARITY SUBDIVISIONS

Depending on the nature of your campaign, MIF may be either too detailed or not detailed enough. For campaigns where music isn't in any way important, it may be easier just to let a character pay 2 Character Points for MIF: All Instruments and let him be as accomplished a musician as he likes — if it's unlikely to have a significant impact on the game, it ought to be fairly inexpensive.

On the other hand, maybe your campaign revolves around musical performances (*Rock 'n' Roll Hero,* anyone?) or features a lot of characters who are musically accomplished and want to distinguish themselves from each other. In that case, perhaps characters can't buy MIFs by category — they have to buy each class of instruments (such as Zithers or Brass Aerophones) individually for 1 Character Point each. (The standard rules about the Skill Roll and how to improve it still apply.) For even greater diversity, characters have to buy each instrument individually (for example, Dulcimer, Bugle, or Violin) for a fixed cost (usually 1 Character Point or ½ Character Point).

MUSICAL INSTRUMENT FAMILIARITY BY GENRE

Musical Instrument Familiarity is pretty much the same from genre to genre and setting to setting. The only thing that changes is the musical instruments available to learn.

Cyberpunk/Near Future; Science Fiction

In a *Cyber Hero* or *Star Hero* setting, electronic music and instruments may have replaced all (or nearly all) of the standard instruments listed above. Instead of learning MIFs, characters would simply buy PS: Play Computerized Music, PS: Compose Computerized Music, and similar PSs.

Fantasy

Music is more likely to be a feature of *Fantasy Hero* campaigns than just about any other thanks to the presence of that archetypical Fantasy adventurer, the bard (see *Fantasy Hero,* pages 62-63). Sometimes music may even have magical properties — in some games bards can use "Song-Spells" (see, for example, pages 133-44 of *The Fantasy Hero Grimoire II*), and the entrancing powers of faerie fiddling or a siren's singing are well-known elements of folklore.

Martial Arts

The instruments listed in the categories above are mostly Western ones. Asian cultures have instruments similar to most of them, and some of their own besides. A little bit of research in appropriate reference materials (see the Bibliography) will let a GM create a list more appropriate to Asian *Ninja Hero* campaigns.

PARACHUTING

Type: Agility Skill (roll: 9 + (DEX/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

Parachuting is a new Agility Skill for use in Military Action campaigns and other games where characters may frequently need to jump out of perfectly good airplanes. If used, it replaces the two TFs pertaining to parachuting (though the GM might retain TF: Basic Parachuting for characters who just want some familiarity with the activity). If the GM would rather not have Parachuting function as its own Skill, he can use this information for characters who have TF: Advanced Parachuting, letting them make DEX Rolls as appropriate.

Parachuting is an Agility Skill; it costs 3 Character Points for a 9 + (DEX/5) or less roll, +1 to the roll for each +2 Character Points. A character with Parachuting knows about the different methods of parachuting and how to perform them safely, how to prepare and use parachuting equipment, and so forth. The Parachuting Modifiers table lists some general modifiers for Parachuting rolls in addition to those mentioned in the text for specific types of jumps; Encumbrance penalties also apply if the character carries too much gear.

BASIC PARACHUTING

Most civilian or sport parachute dives take place from no higher than about 12,000 feet (3,658"), with the jumper carrying little to no extra equipment or gear. The character only needs to make a Parachuting roll to ensure that his chute opens safely and he lands without incident (for routine jumps, the GM may not even require a roll). If the roll succeeds, all is well. If the roll fails, it usually means that the chute opened but the character missed his landing zone (possibly landing in a tree, in the water, or in some other inconvenient place). If the roll fails badly (by 4 or more), disastrous consequences could result. The worst is that the chute fails to open and the character plunges to his death (or at least to serious injury; see below). At the GM's option, if this happens a character can make a second Parachuting roll at -2 to get the reserve parachute to open. If this roll succeeds, the character won't get hurt, but suffers a -4 on rolls to steer (if the GM allows steering at all).

PARACHUTING MODIFIERS

Condition	Modifier
Airborne maneuvering (to get into formation or the like)	-2 or more
Difficult drop zone	
Very Small (less than 4" radius)	-4
Small (4-8" radius)	-2
Hard to reach/surrounded by obstacles	-2 or more
Nighttime jump	-2
Weather, adverse (rain, *etc.*)	-2 or more
Winds	
High winds	-2
Very high winds	-4

If the roll fails and the reserve chute doesn't open (or the character doesn't have one), he may take an all too quick and deadly trip to the ground (in which case, the falling rules apply). But a chute failing to open isn't necessarily the only result of a failed Parachuting roll. Other possible consequences for a failed roll include: the character hurts himself when he lands; the character gets snarled in his chute when he lands and has to spend 2d6 Phases freeing himself; or the character *really* misses his target landing area. A badly failed roll (by 4 or more) should definitely mean a very unpleasant result for the character, up to and including death due to "sudden deceleration trauma." In that case, the best a character can hope for is to walk away from a bad landing with sprains, bruises, and perhaps broken bones (1d6 BODY damage, halved if the character succeeds with a Breakfall roll, but with a minimum 1 BODY damage).

Steering

Assuming a character's parachute opens properly, he can steer toward his target "drop zone" (designated landing area). Parachutes aren't highly steerable, though modern ones (from the mid-1960s and after) are much better in this regard than versions used earlier in the century. A character can make a Parachuting roll to land in his drop zone; he suffers a basic -2 penalty, with another -1 (or worse) if the winds are particularly strong or fierce. Success means he's in the drop zone (and the better the success, the closer he is to dead center); failure means he misses (and the greater the failure, the further away he is).

ADVANCED PARACHUTING

The military uses advanced parachuting techniques for various insertion missions.

MAMO: The basic parachute jump associated with most military operations is a *MAMO,* or middle altitude, middle opening. The jump takes place from 500 to 1200 feet (152" to 366"); a static line opens the chute almost immediately. Completing a MAMO properly requires a Parachuting roll with no modifiers. Due to the relatively short fall distance, the parachutist has relatively little ability to steer toward the "drop zone" (designated landing area); any rolls made to steer suffer a -2 in addition to other penalties.

LALO: A *LALO* (low altitude, low opening) jump takes place from 300 to 500 feet (91" to 152"). Despite the fact that the parachute is pulled instantly by the static line, the jumper is likely to suffer a rough landing... and if the main chute fails, there's no time to pull the reserve. Offsetting these risks is the fact that the aircraft and jumpers evade radar by flying so close to the surface. Completing a LALO successfully requires a Parachuting roll at -4 (this is in addition to the standard roll to see if the parachute opens, and so forth). For every point by which the character fails the roll, he takes 2d6 Normal Damage (rolled as a Low Shot for Hit Location purposes, if desired) when he lands due to a rough landing.

HALO: A *HALO* (high altitude, low opening) jump begins at 25,000 to 30,000 feet (7,620" to 9,144"), but the jumper doesn't open his chute until 2,000 feet (607") or below. HALO allows the aircraft to fly above the range of surface-to-air missiles and the like. Furthermore, the jumper has no radar profile (making him very difficult, at best, for anyone on the ground to detect), and by making a Parachuting roll the jumper can "track" — steer himself to a drop zone up to about 36 miles from where he jumped (thus helping to disguise his ultimate destination). But the jumper must have special breathing and heating equipment to survive the velocity and frigid air (see below). And if he loses his aerodynamic stability (not an unheard-of thing for someone falling at 120 miles per hour), he'll probably never be able to open his parachute and will fall to his death. Performing a HALO successfully requires a Parachuting roll at -4 (this is in addition to the standard roll to see if the parachute opens, and so forth). Steering to the proper location requires a Parachuting roll with a penalty of -1 per three miles "tracked." For every point by which the character fails the roll, he takes 2d6 Normal Damage (rolled as a Low Shot for Hit Location purposes, if desired) when he lands due to a rough landing.

HAHO: A *HAHO* (high altitude, high opening) jump begins at 25,000 to 30,000 feet (7,620" to 9,144"), with the jumper opening his parachute almost immediately (if it's not opened by static line). The chute is specially designed to function something like a hang-glider; it allows for maximum steering ability (this eliminates the standard -2 penalty on Parachuting rolls to steer), and allows the jumper to travel up to several dozen miles from where he jumped. (This makes it possible to, for example, jump in friendly territory but then drift into enemy territory.) Steering to the proper location requires a Parachuting roll with a penalty of -1 per five miles "tracked." The jumper requires the same equipment has HALO, and exposes himself to many of the same risks. Performing a HAHO successfully requires a Parachuting roll at -2 (this is in addition to the standard roll to see if the parachute opens, and so forth). For every point by which the character fails the roll, he takes 2d6 Normal Damage (rolled as a Low Shot for Hit Location purposes, if desired) when he lands due to a rough landing.

EQUIPMENT

Obviously Parachuting requires a parachute (see writeup below). Additionally, a character making a high-altitude jump without oxygen or heating gear (a thermal jumpsuit, jump helmet) exposes himself to oxygen deprivation (see the rules for drowning on page 424 of *The HERO System 5th Edition, Revised*) and to temperatures of approximately -35° to -65° Celsius (-31° to -85° Fahrenheit) (this inflicts 2d6 NND damage on Segments 3, 6, 9, and 12). Given falling speed and temperature, it's not unknown for a jumper's goggles to freeze and shatter, and his eyes to freeze shut (if he has no goggles, his eyes almost certainly freeze shut). A blinded parachutist suffers a -3 penalty on all rolls, and must make a roll at -6 just to land safely.

PARACHUTE

Effect: Gliding 6"; Limited Movement
Target/Area Affected: Self
Duration: Constant
Range: Self
Charges: 1 Recoverable Continuing Charge
Breakability: 1 DEF

Description: This is the standard modern parachute used with the *Parachuting* Skill.

Game Information: *Gliding 6" (6 Active Points); OAF (-1), Limited Movement (character cannot gain altitude, and must move at least 12" downward for every 1" forward; -½), 1 Recoverable Continuing Charge (lasts until character hits the ground or 'chute is fouled; -¾). Total cost: 2 points.*

Options:

1) Parawing: This is the chute referenced above under HAHO; it's designed to function something like a hang-glider and allows for maximum steering ability. Add +2 to Parachuting (4 Active Points); Only To Counteract The Standard -2 Steering Penalty (-1). Total cost: 2 points; total cost of gadget 4 points.

POWERS AND PARACHUTING

Characters with innate Flight or Gliding abilities don't need Parachuting; characters with artificial versions of those powers (such as a jetpack) may wear a parachute (even if it's a comic book technology "mini-chute" easily concealed under a jacket) in case of emergency.

CONSEQUENCES OF FAILURE

The consequences of failing a Parachuting roll are discussed above.

BASE TIMES

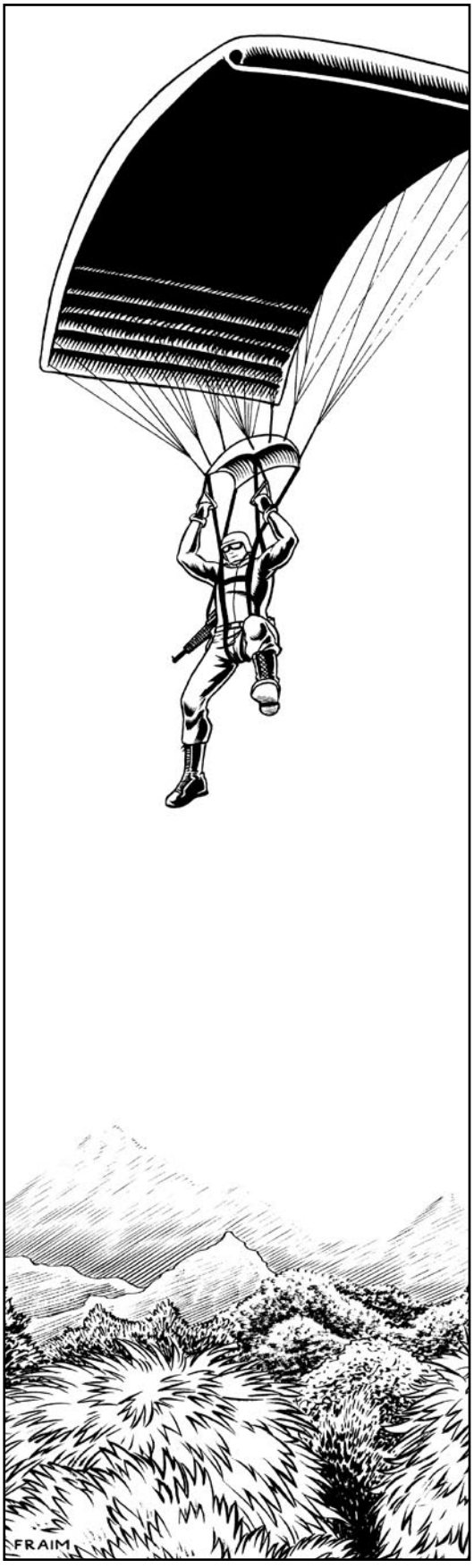
The Base Time for Parachuting depends on the height from which a character jumps and the type of jump he's making — some falls take a looooong time. Pulling the ripcord typically counts as an Action that takes no time.

SKILL SUBDIVISIONS

For campaigns where characters often use Parachuting, the GM might want them to buy it by categories. For 2 Character Points, the character can make "basic parachuting" and MAMO jumps with a DEX-Based Roll. For each +1 Character Point they can buy another type of jump (LALO, HALO, or HAHO).

PARACHUTING BY GENRE

Parachuting only becomes available in genres and time periods after the device is invented (which of course means characters also need access to planes, balloons, or other things to jump out of). The modern form of parachuting has been possible for nearly two centuries. References to parachute-like devices appear in Chinese writings from circa 90 BC, and Leonardo da Vinci described a workable model in 1480. The first known actual parachute jump (by L.S. Lenormand, who also named the device) took place in 1783; Jean-Pierre Blanchard made the first successful parachute jump from a balloon ten years later. By the 1930s there were parachuting competitions. The military used parachuting beginning in World War I.



POISONING

Type: Intellect Skill (roll: 9 + (INT/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

Poisoning is an optional Intellect Skill appropriate to some campaigns (particularly certain types of *Fantasy Hero* games). A character with Poisoning know how to manufacture and use poisons — the ingredients involved (and where to find them), how to compound or brew them together, how to apply poison to an object, how to introduce poison into a target's body, and so forth. It does not confer any broader knowledge of chemistry or the use of drugs (that requires various Science Skills) nor of how to use weapons (that's Weapon Familiarity).

A character with Poisoning also knows about standard and common poisons (and perhaps even about rarer or more obscure ones), famous poisoners and acts of poisoning, and the like. Usually this requires a basic Skill Roll (if a roll is even necessary), but the GM should impose a penalty if the information is rare or obscure.

Although Poisoning is an Intellect Skill (primarily because it requires extensive knowledge of poisonous substances and what can be done with them), the act of introducing poison into a person's body may require deftness more than wit. In that case, the GM can base the roll on DEX rather than INT (see page 11 for more information), or even require a successful Sleight Of Hand roll before the character can make his Poisoning roll.

Poisons

Poisons are commonly used in many games. Besides the threat of venomous animals, characters may have to deal with unscrupulous courtiers introducing poison into their food and drink at the King's feast, ninja wielding poison-smeared blades, jungle tribesmen with poisoned blowgun darts, and the like.

In *HERO System* terms, lethal poisons are typically built as RKAs, NND Does BODY (the defense being the appropriate Life Support [Immunity]), OAF Fragile, No Range, and Charges. Nonlethal poisons, such as knockout drugs, are usually bought as Drains (often with NND as well); many lethal poisons also have a Linked Drain CON effect (since even if someone survives the poison, it makes him weak and ill). Gradual Effect is a common Limitation for either type, but not necessarily required; so is Extra Time (representing an onset time before the Gradual Effect starts to occur).

CREATING POISONS

Before a character with Poisoning can use poison, he has to obtain some. Usually this means making his own, since buying poison is almost always illegal (and dangerous) and an expert prefers not to rely on someone else's work.

Making poisons requires the proper equipment, given the genre and setting — kettles, glassware, ingredients, beakers, test tubes, and so on. A character with Poisoning knows where to obtain these things, particularly the ingredients. In some campaigns this means gathering herbs, leaves, fungi, minerals, and other natural substances. In modern-day and future settings a character may simply go to his lab and mix together the right raw chemicals to create his deadly brew.

To create a poison, a character must make a Skill Roll. This takes a minimum of 1 Minute per 10 Active Points in the poison, and may take much longer (hours, or even days). The character suffers a penalty of -1 per 10 Active Points to his Skill Roll, but may gain extra time bonuses for taking longer than the prescribed amount of time. The GM may impose other bonuses or penalties as he sees fit.

If the character's roll succeeds, he has brewed the poison properly, and now has a number of "doses" equal to the Charges in the poison's *HERO System* write-up. If the roll fails by 1-3, he fails to create the poison — or, in the GM's discretion, may create a much weaker toxin. If the roll fails badly (by 4 or more), the character not only does not create any poison at all, but in the GM's discretion he may have suffered some calamity (a laboratory explosion, accidentally poisoning himself, or the like).

Harvesting Poison

Characters who fight venomous animals and monsters may have the chance to "harvest" poison from the corpses of their defeated foes. The GM must first determine if the creature has any poison left. It may have used it all up in battle, or the characters' attacks could have pierced its reservoir and spilled all the venom. If necessary, determine this randomly: on a roll of 11-, the animal's venom reservoir is intact. The GM can adjust the roll up or down to reflect the situation.

To harvest a poison reservoir, a character must make a roll. If he has an appropriate Knowledge Skill (such as KS: Animals), he only has to make a DEX Roll to do the job properly. If he lacks an appropriate KS, he must make an 8- roll (to judge where to find the reservoir) *and* make a DEX Roll. If any of these rolls fail, the character loses all the poison (if they fail badly — by 4 or more — he may have accidentally poisoned himself).

Once a character has extracted a venom reservoir, he must store it properly, or else the venom evaporates, expires, or weakens. Use the rules for injected poisons, below, but diminish the venom per *day,* rather than per hour.

Creating Antidotes

What the character can create, he can also counteract. Instead of creating a poison, a character can create an antidote to a poison. Use the rules for creating poisons, above. Of course, the character has to know what poison was used on someone (see *Evaluating Poisons,* below) before he can create the right antidote. The wrong antidote — either because the character misidentified the poison involved or failed his antidote creation roll by 4 or more — could do just as much harm to the victim as the poison!

HEALING AND POISONS

As noted on page 246, characters can use Paramedics to treat some types of poisoning. The GM should only allow a character to make Paramedics rolls to diminish the effect of poison if (a) the poison is a common and well-known one, or (b) that character has special knowledge of the subject (*i.e.,* he succeeds with a Poisoning or KS: Poisons roll to identify the poison used). For example, if a character got to a snakebite victim right after he was bit, the character could use Paramedics to put on a torniquet above the wound, make an incision, and suck out some of the poison. However, once a poison starts to degrade a person's flesh, internal organs, and/or nervous system, the character may be out of luck. Modern or future medicine may be able to cure him (perhaps at the price of a lengthy and painful recovery period), but there's usually nothing Fantasy-era medicine can do to help him.

A spell, drug, potion, or ability using the *Healing* Power can heal damage already taken from poison, but it doesn't stop further damage from accruing if the poison has a Gradual Effect. However, at the GM's option, a character could use a Healing-based spell to counteract "future" poison damage from a poison already in the character's system. Alternately, this may require a Transform (poisoned person to non-poisoned person).

INTRODUCING THE POISON

An attacker can introduce a poison into a character's body in one of three ways.

Injected Poisons

The first is *injection* — the poison is violently placed into the victim's body by means of an animal's stinger, a bladed or pointed weapon, or the like. This type of poison takes the Limitation *HKA Must Do BODY Damage* (-½), since it's Linked or related to an HKA of some sort that must pierce the skin. Charges is another common Limitation, representing the contents of a poison reservoir, the amount of poison smeared on a blade, or the like.

Venomous animals obviously don't need to make any Skill Rolls or the like to ready their venoms. Applying poison to a blade for use against an enemy normally doesn't require a Skill Roll, either, provided the character has plenty of time (at least 1 Minute) and a peaceful environment in which to do the job. If the character has to apply the poison more quickly, crisis conditions exist (such as being in the middle of a battle), or the GM wants to restrict the use of poison, a character who's applying poison to a weapon must make a DEX Roll. If the roll succeeds, he applies the poison without difficulty. If it fails by 1-3, the poison was improperly applied and has no effect; the character has simply wasted the poison. If it fails by 4, the character accidentally poisons himself and takes damage (either full damage, or something less, depending on the GM's judgment). Typically a character has to roll once for each dose (Charge) of poison applied, but the GM may prefer to have the character just roll one time for all the doses.

Animals' venoms do not expire or become weakened as long as the animal lives. However, at the GM's option, a poison placed on a blade or the like wears off if not used (every successful use of it consumes a Charge, of course). For every hour that passes since the poison was applied, either remove one Charge, or reduce all remaining Charges by 1 Damage Class.

In most cases, the poison on a blade is visible, and has an odor; characters may make a PER Roll to perceive it. Poisons built with the *Invisible Power Effects* Advantage don't suffer from this drawback.

EXAMPLE IMMUNITIES

Cost	Poison
3	Animal Poisons (other than serpent and spider poisons)
2	Deep Elf Poisons
2	Orcish Poisons
3	Plant Poisons of the Eastern Realms
3	Plant Poisons of the Western Realms
3	Serpent Poisons
2	Poisons of the Silverleaf Guild
3	Spider Poisons
2	Tornathian Ingested Poisons
2	Toxins of Thfn
3	Turakian Poisons

Ingested Poisons

Second, a victim can *ingest* a poison, either by eating/drinking it, or in the case of poison gas inhaling it. An attacker has to get the poison to the victim some way — hide it in his wine, pump it into the room he's in — so the victim can take it into his body. Gaseous poisons take no Limitation (except perhaps one reflecting the fact that they don't work in high winds or rain), but GMs may allow other ingested poisons to take a -½ Limitation, *Must Be Ingested.*

Introducing poison into someone's food requires planning and skill. Either the attacker must have access to the character's food as it's being cooked/prepared, or he has to put the poison in it right before he gives it to the character. To do the latter, he has to hide his actions from the character in some way — either conceal the food/drink behind something for a second, or make a Sleight Of Hand roll (opposed by the character's PER Roll).

When a character confronts food and drink he suspects may be poisoned, he can ask for a PER Roll to try to detect the toxin; if the character has Poisoning, he may choose to make that roll instead at +1. (In the case of poisons so strong they're difficult to conceal in food, the GM may allow a PER Roll regardless of whether the character asks for one.) If the poison matches or blends in with the color of the food/drink, the character receives no bonus to his PER Roll (and may even suffer a penalty); if the two don't match, he may receive a +1 or +2 bonus. The character may also taste a tiny amount of the food/drink in the hope of detecting the poison without exposing himself to a damaging dose. If the food/drink has a strong flavor, he receives no bonus (and may even suffer a penalty); if the poison overpowers the flavor of the food/drink, he gets a +1 (or higher) bonus.

Contact Poisons

Lastly, some poisons are so lethal that simply touching them can kill a character — even the tiniest amount seeps through the skin and into the body. Contact poisons don't take any unusual Limitations, though they sometimes have Trigger (when character touches poisoned object; +¼ or more). Characters can apply and detect contact poisons as they do injected poisons.

Classifying Poisons

Since the defense against most poisons is Life Support (Immunity), a character should classify any poison he creates (thus defining the proper Immunity for it). There are two options.

First, he can use the categories already defined for Immunity (see page 198 of *The HERO System 5th Edition, Revised*). Although simple and easy, this method lacks flavor.

Second, he can create categories specific to your campaign based on the source of the poison, who makes it, and other factors. The accompanying text box provides an example Immunity system for a *Fantasy Hero* campaign set in Ambrethel (the world of *The Turakian Age*), using as a guideline a cost of 2 Character Points for poisons specific to a race, group, or location, and 3 Character Points for poisons from specific types of animals or plants.



EFFECTS OF POISON

Typically, the purpose of poison is to kill. However, not all poisons have fatal effects; some just make the victim sick or dizzy, or knock him out.

In the real world, poisons generally make the victim feel ill, then cause cramps, convulsions, and eventually death. Sometimes they have other minor effects, like raising (or lowering) body temperature, causing drowsiness or drunkenness-like effects, impairing the senses slightly, or mildly discoloring some part of the body. But in fictional settings, poisons can have many horrific effects that heighten the drama of the situation. They could, for example, cause extreme insanity prior to death, strongly discolor the victim's body, make the victim bleed from the pores, or the like. Players and GMs should be fiendishly clever in their descriptions of a poison's effects.

Evaluating Poisons

A character with Poisoning can evaluate a poisoning victim (living or dead) to determine what sort of poison was used on him. To do so he must examine the victim for at least 1 Turn and make a Skill Roll. The roll suffers a penalty of -1 per step down the Time Chart since the victim was poisoned (though if the poison remains active because of Gradual Effect, this penalty does not start to accrue until all increments of damage have been applied). If the roll succeeds by up to 2 points, the character can identify the general type or class of poison used (and perhaps from that make educated guesses about exactly which toxin is involved). If it succeeds by 3 or more, the character typically knows the exact poison used. If the roll fails, he cannot identify the poison; if it fails badly (by 4 or more) the character mis-identifies the poison.

If a character finds an unidentified poison (for example, among the effects of an assassin he's just captured), he can make a Poisoning roll to identify it. This takes the same time as evaluating a poisoning victim and usually involves applying simple tests to the poison to determine what it is. If the Poisoning roll succeeds, the character can identify the general type or class of poison; if it succeeds by 2 or more he identifies the poison exactly. If the roll fails, he cannot identify the poison; if it fails badly (by 4 or more) the character mis-identifies the poison.

POISON IN THE CAMPAIGN

In Superheroic games, characters have to spend Character Points to buy poisons. Since many poisons are powerful and expensive, the high cost often makes buying too many of them prohibitive.

In Heroic-level games, typically characters can buy poisons with money instead of Character Points. This may cause problems in the game. Eager for its potent offensive power, characters may suddenly invest heavily in poison and use it constantly, throwing off campaign balance.

Gamemasters who want to restrict the use of poison in the campaign have several options.

First, make poisons difficult to create and obtain. Lengthen the creation time (and increase the perils of poison-brewing). Make poison so rare that it's difficult to find in the market, and incredibly expensive to purchase. Possession of poison may also be illegal, causing characters further problems when they try to buy or carry it.

Second, make poisons difficult to use. Increase the speed with which they weaken or evaporate. Require a character to make a DEX Roll in every Phase he uses a poisoned weapon, with failure meaning he has accidentally poisoned himself. Give poison-using characters a *Reputation* Disadvantage that makes it hard for them to live or work with folk who object to poison use.

Third, if necessary, forbid characters to use poison altogether. After all, it's not heroic — it's something assassins, thieves, and other Evil people do. While heavy-handed, this method may prove the best and easiest for many campaigns.

EQUIPMENT

As noted above, Poisoning requires equipment. Characters need raw materials to make poisons from, the gear to brew or concoct the poison in and with, and sometimes weapons, needles, or other devices to introduce the poison into the victim. Standard rules for lack of equipment or using poor-quality equipment apply.

POWERS AND POISONING

Some characters may have the innate ability to poison people by bite, claw, or touch. This is usually bought just like an ordinary poison, but without some Limitations (such as Focus). Characters with appropriate Healing or Transform powers can counteract poisoning (see sidebar). Some Defense Powers may prevent a character from being poisoned with an injected poison because it's difficult (if not impossible) to pierce the character's skin with a blade or needle. And of course Life Support (Immunity) can protect a character from poisons.

CONSEQUENCES OF FAILURE

The consequences for failing to create a poison, identify a poison, prepare an antidote, or apply poison to a blade are discussed above. In general a Poisoning roll failed by 1-3 has no negative impact beyond the failure itself. A badly failed roll (by 4 or more) tends to mean something bad is happened — most likely that the character accidentally poisoned or hurt himself. Working with toxins is not a job for the faint of heart, slow of wit, or unsteady of hand.

BASE TIMES

The Base Time for creating a poison is 1 Minute per 10 Active Points in the poison, but at the GM's option some poisons may take much longer. (And of course this doesn't account for the time needed to acquire the ingredients and other equipment needed.) Characters often take extra time to improve their chances of success. The same applies to creating antidotes.

Harvesting poison from an animal or monster usually takes a minimum of 5 Minutes, and possibly longer depending on the size of the creature, the toughness of its flesh, the location of the poison sacs, and so forth.

Applying poison to a blade can be done in as little as a Full Phase, but doing it safely requires a minimum of 1 Minute (typically per dose applied). Putting the poison on quicker requires a DEX Roll to do so safely (see *Injected Poisons,* above).

Evaluating a poison or poisoning victim typically requires a minimum of 1 Turn. Again, if possible characters usually take more time to improve the chances of making a correct identification... but if a character's trying to save a person who's been poisoned, he may not have the luxury of time.

SUBDIVIDING POISONING

One of the ways to make Poisoning less likely to unbalance the campaign is to have characters buy it *by poison* or *by class of poisons* (as the GM prefers). The first poison (or class of poisons) the character knows how to create, identify, or prepare an antidote for costs 2 Character Points for the INT-Based roll; each additional poison (or class of poisons) costs +1 Character Point. If characters buy Poisoning by class of poison, they can instead buy the ability to make a single poison (rather than an entire category of poisons) for 1 Character Point.

POISONING BY GENRE

Generally, Poisoning works the same in all genres — the only issue is what sort of technology and chemistry are available for use by the poisoner. In modern, near-future, and future settings, the technology might exist to genetically tailor a poison to a specific individual or class of persons. (This might also be possible in games featuring Weird Science regardless of the era.) In a campaign setting featuring magic, there might be enchanted poisons that can only be cured by appropriate countermagic combined with an antidote.



RESEARCH

Type: Intellect Skill (roll: 9 + (INT/5) or less)
Cost: 3 Character Points for a base roll, +1 to the roll per +2 Character Points

Research is an optional new Intellect Skill that represents a character's ability to locate information on academic and professional subjects. The character knows about standard research methods and sources (libraries, databases, archives, websites, and more), the methods for using them most efficiently, their reliability, and which ones are best for which subjects. He also knows how to organize research materials for best results, how to find the truly useful bits of information amid a flood of semi-useful facts, and so forth.

Except for how it works with Cramming (see below), Research does *not* allow a character to acquire new Skills (even temporarily). Instead, it assists him when he's using another Skill (primarily a Knowledge Skill or Science Skill) to look up information. Nor does Research allow a character to create "new" information; it only allows him to find information that already exists. If a character's trying to find information that's never been recorded, he automatically fails; if he's researching something the GM knows is only located in a specific book or place, he automatically fails if he lacks access to those materials.

USING RESEARCH

Research has two main functions: to assist a character with Cramming; and to assist a character with research-oriented tasks pertaining to other Skills.

Cramming

If a character succeeds with a roll using Research, he reduces the time needed to Cram a subject by 10% per point the roll succeeds by (to a maximum of 50%, or half the time). If the character also has Speed Reading or Eidetic Memory, the Research reduction applies *after* those reductions are applied. If the roll fails; he receives no reduction; if it fails badly (by 4 or more), increase the time required to use Cramming by 50% or more.

At the GM's option, if a character with Research succeeds with his roll by 3 or more, he can increase his roll with the Crammed Skill by +1 (though Skill Levels still cannot apply). For a Critical Success (or perhaps even success by half), he can increase it by +2. If the roll fails, the character doesn't gain any boost to his Crammed Skill; if it fails badly (by 4 or more), reduce his Crammed Skill's roll to 7-.

Other Skills

Characters' other Skills, particularly Knowledge Skills and Science Skills, often represent their knowledge of a given subject and/or their ability to find information about it that they need but don't have memorized. Researching a fact or subject requires a Base Time depending on the complexity



of the subject — see *Knowledge Skill* and *Science Skill* in this chapter for details. If a character succeeds with a Research roll, he reduces the time needed for that task by 10% per point the roll succeeds by (to a maximum of 50%, or half the time).

Alternately, the character can choose to use Research as a Complementary Skill for such tasks. That means Research doesn't reduce the time required to research something, but makes it even more likely the character finds the information he needs.

Substituting For Other Skills

At the GM's option, a character with Research can use it to look up *one* discrete, easily-ascertained fact pertaining to a Skill that character doesn't have (typically a KS or SS). He can only do this once per game session (or adventure, if the GM prefers) and the GM can rule that some facts are too complex for a character to learn about this way. This requires a Base Time of 1 Hour and a successful Research roll. If the roll fails, the character learns nothing; if it fails badly (by 4 or more), he spends double the Base Time in his fruitless quest.

EQUIPMENT

Research by definition requires equipment — specifically, reference materials and other sources of information about the subject at hand. The "equipment" in question might actually be a knowledgeable person the character can speak with to find out what he wants to know, rather than a collection of books or computer files, but the character has to have *something* to extract information from.

POWERS AND RESEARCH

If the *Speed Reading* Talent isn't already in use with Cramming (see above), characters who have it can use it to reduce the time required for a Research task. For every x10 faster reading ability, reduce the Base Time for using Research by 20% (maximum reduction of 60%, to 40% of the normal Base Time).

CONSEQUENCES OF FAILURE

A failed Research roll generally means inability to find the desired facts. See above for information about failure with specific tasks.

BASE TIMES

Research doesn't typically have a Base Time itself; it depends on the Base Time for the Skill a character's using it with. For situations in which a character uses Research as a Complementary Skill for other Skills, it uses the Base Times for Knowledge Skill (see page 212).

SUBDIVIDING RESEARCH

In campaigns where characters tend to research things a lot, the GM may require them to buy this Skill by specific fields, such as History, Hard Sciences, Social Sciences, Government Data, and so forth. Typically the first field costs 2 Character Points for an INT-Based Roll; each additional category costs +1 Character Point.

RESEARCH BY GENRE

Research works the same in all genres and time periods. However, when adjudicating the effects of Research, the GM should remember that pre-modern periods (not just Fantasy, but Western, Victorian, Pulp, and the like) are slower ages with slower communications — times that are much less technologically oriented than the twenty-first century. Characters can't run a quick search of the county records on a computer — they've got to thumb laboriously through them, using whatever indices or other organizational tools are available. Getting information to or from a distant colonial office or a keep on the borderlands may take days, weeks, or months. In these situations, knowing the right person (Contacts) or flattering the right bureaucrat the right way (which may require other Interaction Skills) can really speed things up... but only so much.

Fantasy

Wizards often use Research to help with their Spell Research (Inventor) work, either reducing the time required or (hopefully) providing a bonus to the Skill, as described above).

chapter three:





SKILLS AND EQUIPMENT

SKILLS AND EQUIPMENT



As stated in the rulebook, if a character pays Character Points for a piece of equipment (such as a weapon or a Vehicle), he doesn't have to buy a Skill to use it — he automatically knows how. However, that only means he knows how to use that one piece of equipment; it doesn't give him a Skill for free. Paying Character Points for a gun doesn't let a character have WF: Small Arms for free; paying Character Points for a motorcycle doesn't give him TF: Two-Wheeled Motorized Ground Vehicles. It just lets him use that one specific piece of gear.

Buying a piece of equipment using the Equipment Points rules in *Dark Champions* does *not* count as paying Character Points for it. A character must have a Skill to use such gear, or suffer the appropriate penalties.

Some Skills, such as Lockpicking, generally assume a character has to have equipment (the appropriate tools or devices) to use them; see the *Equipment* section of each Skill's description in Chapter Two for more information. Unless stated otherwise in the Skill's writeup, it's not necessarily assumed the character gets the necessary basic equipment for "free," because he may have to pay money for it in-game or the like. But he doesn't have to pay a separate Character Point cost for it.

AUTOMATONS

Automatons can buy any Skill unless the GM rules otherwise. However, they rarely buy Interaction Skills, since they have little if any "personality" to use with them; they're immune to the effects of Interaction Skills themselves. Since most Automatons are "mindless" to one degree or another, it's also uncommon for them to buy many of the Intellect Skills, such as Concealment, Deduction, or Disguise.

Automatons with the *Takes No STUN* Power do not have to pay triple cost for Combat Skill Levels, Defense Maneuver, or any other Skill with "defensive" applications. That rule applies only to other Powers and Talents, such as Damage Reduction.

Automatons cannot buy Skill Enhancers.

COMPUTERS

Computers can buy most Skills, though not ones that involve physical motion or activity since they can't move. This includes (but isn't necessarily limited to) Acrobatics, Breakfall, Climbing, Contortionist, Defense Maneuver, Martial Arts, Riding, Shadowing, Sleight Of Hand, Stealth, and Two-Weapon Fighting. However, in *Cyber Hero* campaigns and other games involving activity in the virtual reality of the Cybernet, Computers can buy some of these Skills to represent cyber-abilities programmed into the Computer. For example, a Computer might have Martial Arts usable only in the Cybernet to represent its ability to "fight" with and defeat a computer security program.

Computers cannot buy Skill Enhancers.

Of course, just because a Computer has a Skill doesn't necessarily mean a character can easily access that Skill and get the Computer to do what he wants. See pages 459-60 of *The HERO System 5th Edition, Revised* for more information on programs for Computers and operating Computers in general.

AGILITY SKILLS

Many Agility Skills that Computers can buy (such as Combat Driving/Piloting) represent their ability to do something when plugged into (or otherwise connected with) a particular device. Computers cannot necessarily use these Skills with just any machine; the machine has to be "computer-ready" or otherwise able to connect to and accept input from the Computer. This generally does not qualify as a Limitation, but may in campaigns where such devices are rare.

At the GM's option, Computers that buy Agility Skills start off with a base 9- roll, just like with Interaction Skills (see below). A Computer's DEX generally represents its processing speed and sophistication (or the like), not the manual deftness that most Agility Skills depend on to some degree. Therefore basing Agility Skills on it may not always make much sense. In some cases (such as a Computer programmed with Combat Piloting), a standard DEX-Based Roll may work fine since the Skill can then be thought of as representing the Computer's reaction speed.

INTELLECT SKILLS

Most Computers focus on Intellect Skills, representing their vast databases and the like. Unless they're artificially intelligent they generally refrain from buying Intellect Skills like Deduction and Gambling that tend to represent (at least in part) human intuition and insight.

INTERACTION SKILLS

Generally Computers do not buy Interaction Skills. If a Computer buys an Interaction Skill (which is based on a Characteristic it doesn't possess), it gets a base 9- roll. It may buy the roll up from there in the usual fashion. At the GM's option, a Computer can buy Interaction Skills as Intellect Skills solely for use against other Computers (and similar machines) to represent sophisticated and subtle information-gathering programming or the like.

COMPUTER PROGRAMMING

A Computer cannot buy a *Resistance* Talent to protect itself from Computer Programming — Resistance Talents only work against Interaction Skills. But a Computer could buy a *Computer Programming* Skill of its own to use as "defense" (possibly with the -½ Limitation, *Defensive Only*). Then it engages in Skill Versus Skill Contests with hackers to "protect" itself — assuming it has programs that tell it to do so.

VEHICLES

Vehicles typically have Skills for one or more of four reasons. First, a Skill may be programmed into a Computer that's an integral part of a Vehicle. For Vehicles with INT, Skills would be programmed into the Vehicle itself, so to speak, but the principle is the same. Similarly, if a vehicle is fully sentient or a living being, it might have Skills.

Second, a Skill may represent a dedicated computer, system, spell, or the like that gives a Vehicle an ability. For example, a "Combat Computer" might give a Vehicle several Autofire Skills, or a flying carpet might have Navigation (Air) due to the enchantments placed upon it. A Vehicle with rotating license plates and crystal-matrix paint that can switch colors might have Disguise.

Third, a Skill can represent some innate ability or capability of the Vehicle. For example, a Vehicle that handles really well in some situations might have innate bonuses to Combat Driving/Piloting or Skill Levels with a Limitation.

Fourth, large Vehicles (such as starships) may have laboratories or similar facilities defined with Skills (see page 468 of *The HERO System 5th Edition, Revised,* and below under *Bases,* regarding laboratories).

Regardless of these special effects and explanations, the GM may rule that some Skills are not appropriate for Vehicles, based on the campaign, common sense, or dramatic sense. For example, it's difficult to imagine buying Breakfall for most (if any) Vehicles. (But see page 106 of *The Ultimate Vehicle* regarding mecha.)

Here are some notes on possible applications of Skills to Vehicles. For the sake of simplicity, it refers to Vehicles "having" or "using" a Skill, even though it's often more likely that the Skill is built into a Computer or a particular device that's part of a Vehicle than into a Vehicle itself. This section is not exhaustive, since many uses for vehicular Skills are obvious, and creative gamers may devise many other potential uses; it simply provides notes on some of the more unusual or intriguing applications. See also Chapter Seven of *The Ultimate Vehicle* regarding vehicular equipment generally.

Vehicles may not buy Skill Enhancers.

INTELLECT, INTERACTION, AND BACKGROUND SKILLS

If a Vehicle buys an Intellect or Interaction Skill (which depend on Characteristics it doesn't possess), it gets a base 9- roll. It may buy the roll up from there in the usual fashion. If a Vehicle buys a Background Skill (typically as part of a laboratory on a large Vehicle), the Vehicle (lab) starts with a base Skill Roll of 11-, not the 9- that's standard for Characteristic-Based Skills (unless the Vehicle only buys an 8- Familiarity with the Skill).

ACROBATICS

With the GM's permission, an agile, fast-moving flying Vehicle could redefine this Skill as *Aerobatics,* using it to perform barrels rolls and other aerial "stunts" easily. It would serve as a Complementary Skill to Combat Piloting for Vehicle Maneuvers in some cases.

COMBAT DRIVING AND COMBAT PILOTING

It's not unheard of for a vehicle's operator to leave the driving/piloting to an autopilot or onboard computer while he does something else (such as operate a weapons system). A Vehicle with one of these Skills can drive/pilot itself while the operator takes another action. (Buying Combat Driving/Piloting for this represents a highly sophisticated autopilot device; simpler ones are defined as Transport Familiarities.) It can also make a Skill Roll as a Complementary Roll to assist the operator with his driving/piloting; this requires a Half Phase Action by the Vehicle.

Vehicles often buy bonuses to Combat Driving/Piloting that are limited to specific situations. For example, a car that handles really well at high speeds might have +4 to Combat Driving, Only For Making Handling Rolls At High Speeds (-1) (total cost: 4 points). This is highly appropriate, provided it's not done to counteract a penalty or negative modifier of some sort. In that case, use Penalty Skill Levels (see below). The GM determines what constitutes "counteracting" a penalty.

COMBAT SKILL LEVELS

Combat-oriented Vehicles often have Combat Skill Levels which they, their operators, passengers, and/or Computers can use in combat. Typically Vehicles (and by extension, Bases) buy only the standard 2-, 3-, 5-, and 8-point CSLs, not the optional 1-, 4-, and 6-point versions discussed in Chapter Two (though the GM can allow this if he prefers).

A 2-point CSL only applies to increase OCV with a single specific weapon or attack. It applies regardless of who makes the attack (the Vehicle itself, an operator, or a passenger). The weapon or attack must be defined when the CSL is bought, and cannot be changed thereafter. Each individual weapon or attack counts separately for these pur-



poses, even if a Vehicle has multiple weapons of the same type. For example, if a Vehicle has both a forward laser cannon and a rear laser cannon, a 2-point CSL with Laser Cannons must be assigned to one or the other, and once assigned cannot be changed. It cannot apply to both, even though both are Laser Cannons.

A 3-point CSL can apply to up to three specific vehicular weapons or attacks. The weapons or attacks to which the Vehicle can apply the CSL must be defined when the CSL is bought, and cannot be changed thereafter. Each individual weapon or attack counts separately for these purposes, even if a Vehicle has multiple weapons of the same type. For example, if a Vehicle has twelve Heavy Machine Guns, and it buys a 3-point CSL, it may define the CSL as usable with any three of the twelve Heavy Machine Guns — it cannot apply the CSL to any of the twelve guns, just to those three. A 3-point CSL applies regardless of who makes the attack (the Vehicle itself, an operator, or a passenger). A 3-point CSL may be used to increase OCV or to increase damage, but may not increase the Vehicle's DCV.

A 5-point CSL can apply to any vehicular Ranged weapons and attacks, or any vehicular HTH weapons and attacks. A normal 5-point CSL may be used to increase OCV or to increase damage, but may not increase the Vehicle's DCV. However, Vehicles may buy 5-point CSLs only to increase their DCV.

An 8-point CSL applies to all vehicular weapons, Ranged and HTH. An 8-point CSL may be used to increase OCV, increase DCV, or increase damage. (A 10-point Overall Level, if applied to combat, functions just like an 8-point CSL.)

Five- and 8-point CSLs can apply to any of the relevant attacks a Vehicle, its operator, and/or its passengers make using vehicular equipment. Whereas 2- and 3-point CSLs can only be used with the weapons/attacks they're assigned to when bought, the more expensive CSLs apply to a much broader range of vehicular attacks. Since this can make them extremely effective, the GM may wish to limit how many a Vehicle can have.

Example: *The* Sword Of Orion, *a powerful starship fielded by the Galactic Empire, mounts fifteen separate beam weapons and missile launchers. One of those weapons is its Plasma Keelcannon. It buys three 2-point CSLs with this weapon. Whenever anyone — the ship itself (via its computer) or any crewmember — fires the weapon, he gets +3 OCV.*

The Sword *also has nine Plasma Blasters. It buys six 3-point CSLs with Plasma Blasters, defining two of them as working with each group of three blasters. Thus, every blaster on the ship, whenever used by anyone, could potentially have two CSLs applied to it to increase OCV or improve the damage done by the attack. However, these CSLs do not apply to the Plasma Keelcannon or the Sword's five missile launchers. Furthermore, only two CSLs can apply to each Blaster; the ship may not reassign all six Levels to apply to a single Blaster — it can only assign the Levels to the weapons defined for them when they were purchased.*

The Sword *also purchases two 5-point CSLs with all Ranged Attacks. The ship can assign these CSLs to any Ranged attacks it makes.*

Five- and 8-point CSLs may be bought with Advantages and Limitations, per the usual rules. Advantages are rarely appropriate, but the following Limitations often are: Activation Roll, Concentration, Costs Endurance, Extra Time, Focus, Incantations (pilot voice command), Increased Endurance Cost, and Requires A Skill Roll.

Because the rules don't allow characters to put Limitations on CSLs costing less than 5 points apiece, a Vehicle may find itself in a situation where it costs more to buy Limited CSLs with a particular attack than it would if it just bought less expensive CSLs — even though the cheaper CSLs are *less* restricted. In that case, the GM may, at his option, allow the Vehicle to buy the less expensive CSLs and treat them as if they were Limited, without actually applying the Limitation to them.

Vehicle's Weapons Versus Vehicular Weapons

A Combat Skill Level with *[Vehicle]'s Weapons* (all the weapons on a particular Vehicle) is a 3-point Level, and can only be applied to OCV. A CSL with *Vehicular Weaponry* (any type of Vehicle-mounted weapon) is a 5-point Level, and can only be applied to OCV. Typically, either type of CSL applies only to Ranged attacks, but may apply to HTH Combat instead (or as well) if the Vehicle has HTH attacks (as many mecha do). If the Vehicle's attacks are all Ranged, one of these CSLs does not apply to Move Bys or Move Throughs (sideswiping and ramming), but characters can buy CSLs separately to represent their talent for running into things. An 8-point CSL with All Combat would apply to ramming and sideswiping, but again, only applies to OCV. Of course, any of these Levels only increase the *character's* OCV with vehicular attacks; they don't apply to the Vehicle itself or anyone else using its equipment.

Characters can buy DCV Levels that they can apply to Vehicles, but this gets expensive because they must be made *Usable By Others* — the Vehicle is a separate "character" from the character, in effect, so he has to "grant" it DCV Levels. When buying the *Usable By Others* Advantage, don't forget to increase it to account for the Vehicle's mass — the upper limit on mass defines the types of Vehicles the character can apply the Levels to. However, the character can apply a -2 Limitation, *Only For [Vehicle Type] Character Is Driving,* to reduce the cost; Requires A Skill Roll may also be appropriate. Granting the Levels to the Vehicle is a Zero Phase Action; the "Attack Roll" succeeds automatically.

Standard Levels In Vehicle Combat

A character who has personal CSLs can use them in vehicular combat if he attacks with his personal attacks. For example, a superhero who has +3 OCV with Flame Blast can use those CSLs if he's attacking a Vehicle with that power, or riding in a Vehicle while blasting at another Vehicle.

A character who has 5-point CSLs with Ranged Combat, 8-point CSLs with All Combat, or 10-point Overall Levels can apply them to increase his OCV with a Vehicle's ranged attacks. The latter two types also apply to increase OCV with HTH attacks (including, for example, ramming); a Vehicle with lots of HTH Combat attacks (such as many mecha) could buy 5-point CSLs to increase OCV in HTH Combat. He can also apply them to increase the damage caused by the attacks he makes. He cannot apply them to increase the Vehicle's DCV. However, if he's attacked by another character in the Vehicle he's in, he could apply them to increase his own DCV against that other character's attacks, if appropriate.

CONCEALMENT

Some Vehicles are designed to blend in well with the terrain they operate in — they're camouflaged, in other words. Vehicles can buy this as Concealment with the Limitations *Self Only* (-½) and *Only In Specific Environments/Situations* (-1; possibly less if terrain occurs frequently). If the Vehicle can change coloration (or the like) to adapt to a wide variety of environments or settings, the latter Limitation doesn't apply, though *Costs Endurance* might.

Hidden Compartments

Some vehicles have concealed compartments where the crew and passengers can hide things. You can buy this as Concealment with the *Self Only* and *Partial Coverage* Limitations. The Partial Coverage defines the size of the space (and thus what can fit within it); designers must take care not to make "hideyholes" too large, for the larger they are, the easier they usually are to detect (the unaccounted-for space tips off searchers). If a character wants multiple compartments for his Vehicle, he can apply the standard "+5 Character Points doubles the number of items of equipment" rule.

Because a hidden compartment is "separate" from the rest of the Vehicle, it's usually best to buy it as a distinct use of Concealment, rather than simply buying bonuses to a ship's overall Concealment. Similarly, GMs may rule that some types of Skill Levels don't apply to the Concealment roll for hidden compartments.

DEFENSE MANEUVER

An agile or highly-maneuverable Vehicle might take this Skill, perhaps with the *Requires A Combat Driving/Piloting Roll* Limitation. Some Vehicles may be designed and built so that they have no clearly definable "back," making this Skill appropriate without any such Limitation.

DISGUISE

A Vehicle may take Disguise to reflect a limited ability to change its appearance — rotating license plates, alterable color scheme, or the like. However, GMs may prefer that Vehicles instead buy Shape Shift with Disguise as a Required Skill Roll (see page 27 of *The Ultimate Vehicle*).

LOCKPICKING

Vehicles buy Lockpicking not to simulate their ability to pick locks, but to represent the difficulty of picking their own locks. Every vehicle has Lockpicking 8- as "Everyvehicle Equipment" to represent standard locks. If a Vehicle wants better locks than that, it buys them using the Power *Skills.*

When someone tries to pick the lock, he has to overcome the Vehicle's Lockpicking in a Skill Versus Skill Contest. (Alternately, the Vehicle may define its locks by taking Change Environment to impose penalties on thieves' Lockpicking.) See the *Skill Gear* section below for some example locks.

MARTIAL ARTS

Typically, Vehicles are not allowed to buy Martial Arts themselves. However, in some campaigns, characters can buy a Weapon Element (such as *Use Art With Mecha*) that allows them to use their Martial Arts with a Vehicle. See pages 106 and 187 of *The Ultimate Vehicle*.

MIMICRY

While Vehicles might take this Skill to allow their public address systems to mimic other voices, or with the GM's permission to make their engines sound different, typically Vehicles should buy such abilities using Shape Shift (see page 27 of *The Ultimate Vehicle*).

NAVIGATION

It's not uncommon for a Vehicle to have this Skill. It often represents an navigational computer, an autopilot's navigational features, or a link to the Global Positioning System or similar systems. A living vehicle might be "navigationally attuned" in some way, just like birds can find their way along migration paths.

PENALTY SKILL LEVELS

Penalty Skill Levels have several applications for Vehicles.

First, Vehicles can buy them for their standard purpose of cancelling OCV penalties for things like attacking smaller targets (Size Skill Levels), attacking specific Hit Locations (Targeting Skill Levels), or overcoming the Range Modifier (Range Skill Levels). Range Skill Levels are particularly common for many combat-oriented vehicles. The 1½-point, 2-point, and 3-point PSLs correspond to the 2-point, 3-point, and 5-point CSLs, respectively, in terms of how they apply to vehicular combat.

Second, with the GM's permission, Vehicles can buy PSLs not to overcome OCV penalties, but to counteract Combat Driving/Piloting penalties for various conditions. For example, a car with special off-road suspension and tires might buy PSLs to counteract off-road driving penalties. A 2-point PSL applies to a single mode of movement; a 3-point PSL applies to all the vehicle's modes of movement, or allows the application of Limitations.

Because the rules don't allow characters to put Limitations on PSLs costing less than 3 points apiece, a Vehicle may find itself in a situation where it costs more to buy Limited PSLs with a particular attack than it would if it just bought less expensive PSLs — even though the PSLs are *less* restricted. In that case, the GM may, at his option, allow the Vehicle to buy the less expensive PSLs and treat them as if they were Limited, without actually applying the Limitation to them.

SECURITY SYSTEMS

Vehicles often buy Security Systems as a *Skills* Power to represent the difficulty of breaking into them; see *Lockpicking,* above. If the Vehicle has security devices (such as weapons or capturefoam projectors) that function when someone tries to defeat the security, it must buy those separately (see page 142 of *The Ultimate Vehicle*).

SKILL LEVELS

Although they're less common than Combat Skill Levels or Penalty Skill Levels, Vehicles can take Skill Levels, if appropriate. For example, many Vehicles buy Movement Skill Levels (see page 301) to represent how well they handle or turn; these add to the operator's control Skill Rolls.

Typically, if a Vehicle buys a 3-point Skill Level, the bonus must come from the same source or device. It cannot define +1 with Disguise, Mimicry, and Security Systems, where the Disguise is a camouflage system, the Mimicry part of a PA system, and Security Systems is an electronic override.

If a Vehicle wants to buy bonuses to all Skills associated with a particular Characteristic, typically it must have the Characteristic in question, even if the Skill Levels are intended to assist the operator rather than the Vehicle itself. The GM is the final arbiter of whether a given type of Skill Level is appropriate for a particular Vehicle.

Because the rules don't allow characters to put Limitations on Skill Levels costing less than 3 points apiece, a Vehicle may find itself in a situation where it costs more to buy Limited Skill Levels with a particular attack than it would if it just bought less expensive Skill Levels — even though the less-expensive Skill Levels are *less* restricted. In that case, the GM may, at his option, allow the Vehicle to buy the less expensive Skill Levels and treat them as if they were Limited, without actually applying the Limitation to them.

STEALTH

Stealth has several vehicular applications. First, it's fairly common for vehicles in fiction to be able to move particularly quietly; in fact, it's even possible with the technology available in the real world. Second, some vehicles are camouflaged, have low albedos, or are otherwise designed in ways intended to make it difficult for others to perceive them. The *Stealth* Skill can represent these abilities. Even where the designer builds these abilities using Sense-Affecting Powers, Stealth may serve as a Required Skill Roll.

SYSTEMS OPERATION

If a character uses Systems Operation to make a PER Roll using a Vehicle's sensory equipment and the Vehicle has some Enhanced Perception bonuses, those bonuses apply to the Systems Operation roll. The character's still making a PER Roll, he's just making it with something that in effect enhances his own INT. In some situations the GM may rule that the character's own INT doesn't really factor in because what matters is the sensor's sophistication and accuracy; in that case he might require the character to make the PER Roll based on the INT of the Computer controlling the sensor, or the like.

TRANSPORT FAMILIARITY

A Vehicle capable of operating itself must have this Skill (whether obtained by buying Combat Driving/Piloting or direct purchase). Similarly, this could represent a "user-friendly" vehicle that tells a passenger how to operate itself, or a vehicle that can reconfigure its control systems to resemble ones the operator is familiar with.

A Vehicle with TF that can "link up" with another Vehicle (typically via a Mind Link of some sort) can operate that Vehicle. This represent a way to "slave" multiple vehicles to a single lead vehicle so they can easily fly in formation.

WEAPON FAMILIARITY

If a Vehicle pays Character Points for a weapon, it does not need a WF to use them. However, the Vehicle's operator and Computer do need appropriate WFs (since they're built separately in rules terms) — WF: Vehicle Weapons for a particular Vehicle, typically (see pages 349-50). With the GM's permission, a Vehicle could buy WF: Vehicle Weapons to make its weapons "user-friendly" (anyone in the Vehicle can fire them without suffering an Unfamiliar Weapon penalty).

BASES

Generally speaking, the rules stated above for Vehicles apply to Bases as well, except where this would be illogical or cause game balance problems. For example, Bases don't buy Skills like Defense Maneuver or Movement Skill Levels because they don't move.

If a Base buys an Agility, Intellect, or Interaction Skill (which depend on Characteristics it doesn't possess), it gets a base 9- roll. It may buy the roll up from there in the usual fashion.

Bases may not buy Skill Enhancers.

CONCEALMENT AND DISGUISE

A Base can buy Concealment or Disguise with the *Partial Coverage* Limitation to represent the fact that some parts of the base are obvious, but others are not. That might be a good way to create, for example, a hidden room within an otherwise ordinary structure.

Laboratories

A Base (and some Vehicles, particularly large ones like aircraft carriers or capital starships) can have one or more *laboratories.* In a game context, a "lab" isn't necessarily just a room containing equipment needed to research and experiment in the hard sciences — as used here the term means a facility of some sort dedicated to one or more of the following purposes:

■ practicing a Skill to maintain or improve a character's level of proficiency

■ conducting research and performing experiments and other tasks pertaining to the Skill

■ serving as a Complementary Skill Roll for the character's Skill

As discussed further below, a "lab" could actually be a room stocked with Disguise equipment, a gym containing equipment for practicing Acrobatics, or a set of lockpicking tools and practice locks.

CREATING A LABORATORY

To build a lab into a Base, simply buy the appropriate Skill. This indicates what the lab's designed for. You can buy a Familiarity for poor-quality labs, or a standard Skill Roll for better ones. Because labs don't have any Characteristics, the base roll for a lab Skill is always 9- (except for Background Skills; see below). Generally speaking, the higher a lab's Skill Roll, the more advanced it is, the more equipment (and types of equipment) it has, and the more raw materials it's regularly supplied with.

All labs require a minimum of one hex of space; many need much more than that.

Example: *Because he's the one who has to design the Champions' base, Defender decides that he's going to build himself an electronics lab. The cost for an electronics lab is 3 Character Points; this gives a lab with an Electronics roll of 9-. Defender buys +8 with the skill; this costs 16 points (total of 19 points). The lab now has a 17- Electronics Roll that serves as a Complementary Skill to anyone doing Electronics research there.*

In some cases, a single facility could serve as a laboratory for multiple Skills. For example, a character could equip a one-room gymnasium to serve as a lab for Acrobatics, Climbing, Martial Arts, and various sports- related PSs. In other words, each lab doesn't necessarily require its own room, though the minimum size of a lab is one hex per Skill built into it (unless the GM rules otherwise).

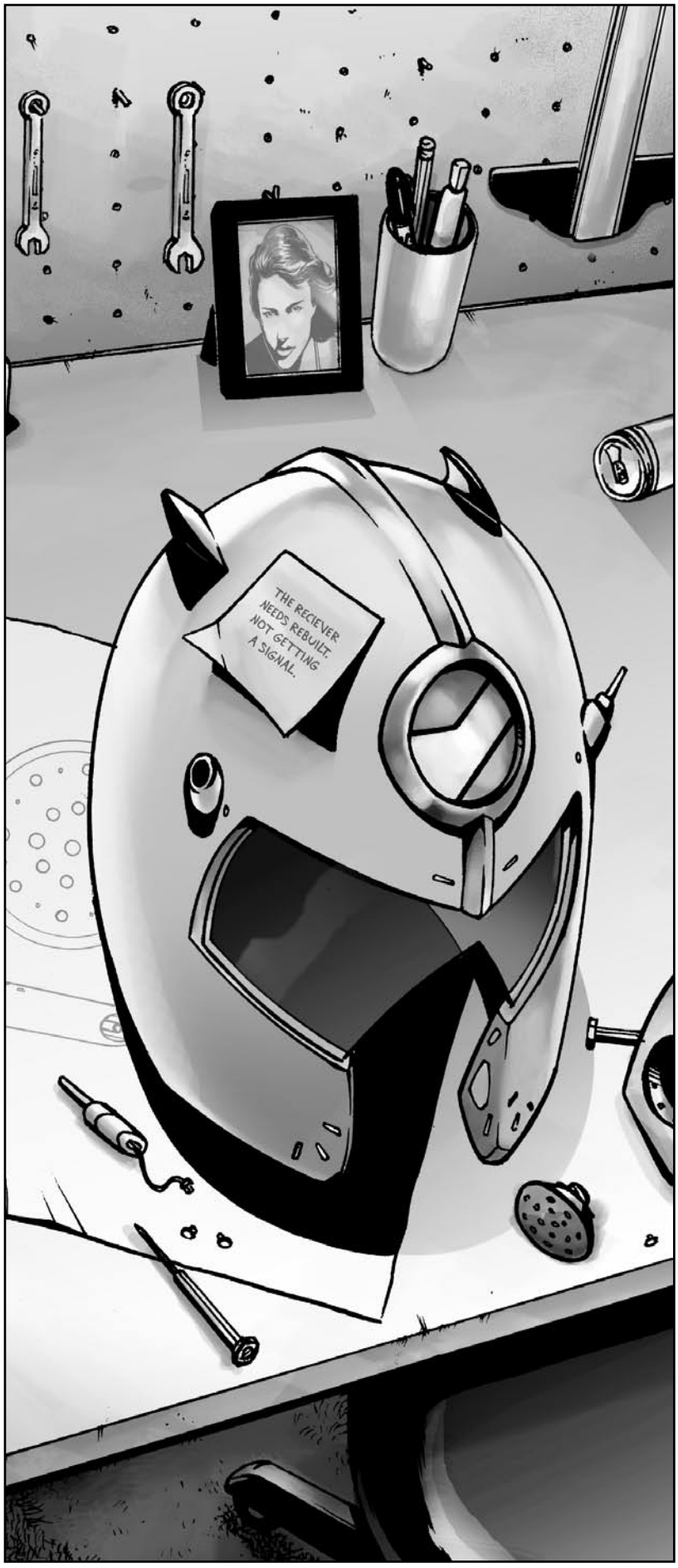
If a Base or Vehicle buys a Background Skill (typically to define or create a laboratory) for 2 Character Points, the lab starts with a base Skill Roll of 11-, not the 9- that's standard for Characteristic-Based Skills for Vehicles/Bases. (Of course, the Vehicle/Base could buy an 8- Familiarity with a Background Skill for only 1 Character Point if it wished.) It may buy the roll up from there in the usual fashion.

For Skills that don't involve rolls (such as Autofire Skills or Martial Arts), a lab can't function as a Complementary Skill or the like, nor can the Base or Vehicle use those Skills itself unless the GM rules otherwise. Buying a lab for one of those Skills means the character's paying for a practice, training, and research area, not a Complementary Skill.

A Base or Vehicle cannot buy a straightforward bonus to a Skill (like "+2 with Security Systems") and call it a "lab." Nor can it buy Skill Levels with a Skill and call that a "lab." To have a lab, a Base or Vehicle must buy the full Skill for that lab as described above. However, after buying a standard lab, a Vehicle or Base could then buy bonuses or Skill Levels for that Skill Roll that only work in that lab, to represent the quality of the facilities (the *Only Within Affected Area* Limitation is applied to the bonuses or Skill Levels so that the Vehicle/Base

LIBRARIES AND DATABASES

Characters who can't (or don't want to) buy a true Base, complete with labs and libraries to help them figure things out, can still own a good library or database by buying bonuses to KSs, PSs, and similar Skills with the -1 Limitation *Must Have Access To Library [or Database] And Time To Do Research.* This is a good way for a character to simulate possession of, for example, an extensive library on Criminology: he can buy +5 to his *Criminology* Skill for only 5 points, but he has to have access to the library to get the bonus. A character should buy this bonus separately for each KS, SS, or other Skill he wants to use it for; to obtain general bonuses to any of a group of Skills he should buy Skill Levels (see page 301).



as a whole doesn't provide the bonus, only the one room that constitutes the lab).

USING A LABORATORY

When a character uses a lab, its roll acts as a Complementary Skill Roll to his own roll. Of course, the lab only helps the character with his own Skill — if he doesn't have the Skill in the first place the lab does him no good. (Most people couldn't make heads or tails out of the equipment in Einstein's laboratory, for example.)

Computers and AIs may also be given control over the laboratories, though of course the Computer or AI must have the requisite Skill to use it. The Computer needs either Extra Limbs, a robot, or a person in the lab to help it use the facility.

EXAMPLE LABORATORIES

Here are some example descriptions of labs appropriate to the various Skills. These aren't necessarily the only possible types of labs; the GM should encourage characters to be creative when designing labs.

Acrobatics: A gymnasium with vaulting horses, rings, parallel bars, balance beams, tightropes, trampolines, trapezes, and other equipment.

Acting: A theater-like room with a stage where a character can practice his Acting abilities. However, this only works if the character has an audience to observe and critique his performance, and usually some people he has to interact with "in character." (A high-tech Acting lab might have holograms for the other people, and an AI computer to evaluate the character's work.) An advanced Acting lab might be an entire fake town, populated by actors hired to work there, in which the character can practice various roles and techniques.

Analyze: The type of lab appropriate to Analyze depends on what the character buys the Skill for. For example, an Analyze Technology lab might contain various technological components that someone changes from time so the character has to come in and try to determine what the new components are. An Analyze Style (or Analyze Combat Technique) lab might be part of a Martial Arts lab (see below) — the character just has to watch other people fighting and evaluate their abilities, rather than practicing his own fighting abilities.

Animal Handler: A corral, menagerie, or zoo where the character can keep wild animals and work with them to tame them, teach them tricks, and so forth. A wealthy character might have an entire game preserve he could use for these purposes (and perhaps for Survival and Tracking as well).

Autofire Skills: A firing range (possibly including a collection of Autofire weapons) where the character can practice his skills. A simple one might be a long room with a backstop to absorb the bullets and hanging clips to hold paper targets; an advanced one might be an entire obstacle course equipped with targets that move, pop up by surprise from behind cover, and so forth.

Breakfall: A facility equipped with various surfaces

onto which the character can practice falling from ledges, balconies, ladders, and so forth. Works well in combination with a Climbing lab.

Bribery: Similar to an Acting lab, a Bugging lab might be a large facility populated by hired actors, some of whom the character has to try to bribe. The actors respond according to instructions telling them whether to be corrupt, average, hard-nosed, unbribeable, or the like.

Bugging: A simple Bugging lab would be a collection of appropriate tools and basic bugs, plus some phones and other objects a character can practice placing or hiding them in. An advanced one might be an entire fake house, fully furnished, that the character has to sneak into and bug, or which he can sweep for bugs.

Bureaucratics: Similar to an Acting lab, a Bureaucratics lab might be a large facility designed to resemble a government office populated by hired actors, some of whom the character has to try to get information or assistance from. The actors respond according to instructions telling them whether to be helpful, obstructive, lazy, or what have you.

Climbing: A room filled with climbing walls, ropes, and other things for a character to climb up.

Combat Driving: A racetrack and/or automotive "obstacle course" where the character can practice driving at high speeds or under difficult conditions. For example, the track might be equipped with high-tech devices that can lay down a sheet of ice, or robot "pedestrians" the character has to avoid.

Combat Piloting: A private airstrip and hangar, plus enough airspace for the character to practice aerial combat. This works best if two characters can practice at once, or one character can fight against a robotic opponent or the like.

Combat Skill Levels: A "combat gymnasium" set up so the character can practice whatever type of combat he bought the lab for. Works well in combination with labs for other Combat Skills.

Since Combat Skill Levels don't involve rolls, and the lab itself generally shouldn't have CSLs it can provide to the Base it's a part of, characters can buy a CSL lab for 1 Character Point for a 2-3 point Combat Skill Level, 2 Character Points for a 5-point CSL, and 3 Character Points for an 8-point CSL. It doesn't matter how many CSLs the character himself has, the Base just pays the cost once to represent the extent of the equipment and facilities available for practice and instruction.

Computer Programming: A room with all sorts of computer equipment — CPUs, printers, monitors, and more — where the character can work on programming, hacking, computer security, and other Skill-related tasks.

Concealment: A room (or series of rooms, possibly even an entire fake house or office building) where the character can practice hiding things, or finding things others have hidden.

Contortionist: A collection of ropes, chains, shackles, straitjackets, and other restraints from which the character practices escaping. (Of course, he needs someone to restrain him with them in the first place.) The lab might also include a series of small and/or oddly-shapes spaces a character can practice fitting his body into.

Conversation: Similar to an Acting lab, a Conversation lab might be a large facility designed to resemble just about any sort of area where characters interact socially (such as a bar). It's populated by hired actors, some of whom the character has to try to get information from by making small talk. The actors aren't necessarily aware that someone's trying to get information from them or who will try; they're just supplied with information and a role to play.

Cramming: To the extent characters can practice Cramming, a Cramming lab would typically resemble a lab for KSs or other Skills a character can Cram.

Criminology: A crime lab set up with microscopes, spectrometers, other equipment for analyzing trace evidence, and reference materials. An advanced Criminology lab might have room for fake crime scenes to be constructed so a character can gather evidence from them, then analyze it using the lab's equipment.

Cryptography: A simple Cryptography lab might be nothing more than a quiet place where a character can sit down with pencil and paper to try to crack codes (or create them). An advanced one would be a high-tech facility equipped with advanced computers and communications devices for encrypting and decrypting messages, trying to break enemy codes, and the like.

Deduction: Similar to an Acting lab, a Deduction lab might be a large facility designed to resemble just about any sort of area where characters interact socially. It's populated by hired actors, some of whom have information the character needs; physical clues in the area might also provide information. The character practices his skill by gathering information until he reaches the correct conclusion. Of course, this means someone else (perhaps an AI computer) has to plan and set up the mystery, including fake clues. For characters on a budget, a simpler Deduction lab might be little more than a collection of logic puzzles for the character to work on.

Defense Maneuver: Similar to a Martial Arts lab, a Defense Maneuver lab would be a dojo-like facility where a character could practice fighting against

LAB COSTS

Here's a quick-reference table for what labs for Characteristic-based Skills cost:

Standard Laboratory:	Characteristic-based Skill at 8-. Total cost: 1 point.
Basic Laboratory:	Characteristic-based Skill at 11-. Total cost: 7 points.
High Laboratory:	*Characteristic-based Skill at 14-. Total cost: 13 points.*
Advanced Laboratory:	Characteristic-based Skill at 17-. Total cost: 19 points.
Extremely Advanced Laboratory:	Characteristic-based Skill at 20-. Total cost: 25 points.
Ultra-Advanced Laboratory:	Characteristic-based Skill at 23-. Total cost: 31 points.

several attackers at once. This means hiring skilled fighters to spar with, or perhaps having robotic or holographic warriors to battle.

Demolitions: A collection of tools and spare parts for building bombs, plus a collection of fake bombs a character can practice disarming.

Disguise: A room equipped with makeup, mirrors, prostheses, the equipment for making prostheses, and so forth. However, in the end the character can't judge the effectiveness of his work without leaving the lab to interact with people and see if they recognize him.

Electronics: A collection of tools and spare parts for building electronic devices, plus a collection of (possibly fake) devices a character can practice disassembling, repairing, and analyzing.

Fast Draw: A collection of weapons and things to draw them from so the character can practice his fast-drawing techniques from a variety of angles and placements.

Forensic Medicine: A coroner's operating room where a character can practice autopsying and analyzing bodies, store bodies for future practice, and so forth.

Forgery: A facility equipped with the supplies needed for the type of Forgery the character practices — printing presses and such for Money; easels, canvases, paints, kilns, and raw materials for Art Objects; and so forth.

Gambling: A simple Gambling lab might be little more than a room with a card table. An advanced one could be a fake casino filled with craps, blackjack, and baccarat tables. In either case, the character needs people to play against; the latter type of lab requires hiring a lot of actors and support personnel to work in the "casino" and give it an authentic feel. If the campaign has sufficiently advanced technology, the character might be able to play against robots or holograms... but for best results he should interact with real people.

High Society: Creating a High Society lab is difficult; it's not likely members of the upper crust are going to willingly come help a character polish his social skills. The best a character can do is something similar to a Conversation lab — a facility, perhaps tricked out to look like a high-class club or resort, where a character interacts with actors hired to pretend to be wealthy and influential people.

Interrogation: The crudest form of Interrogation lab is little more than a room with a chair to tie a captive to and light provided by a single bare bulb or torch. More advanced ones include fully-stocked torture chambers, rooms equipped with lie detectors, truth sera, and other advanced sensory devices, and facilities designed to isolate and psychologically/physically stress a captive so he's more likely to break.

Inventor: An Inventor lab is part of some other relevant lab, such as an Electronics lab or Magic lab, since Inventor by itself can't do anything. The Inventor part of the lab includes advanced tools, components, and reference materials to help the character with his tinkering.

Knowledge Skill: Knowledge Skill labs are libraries — collections of books and other reference materials (such as an Internet connection) pertaining to the subject in question.

Language: Language labs are like KS labs, collections of reference materials. They may also include audio equipment for listening to tapes of someone speaking the language, and perhaps trained actors who can converse with the character in the language he's learning or practicing.

Lipreading: A Lipreading lab at its simplest is just a room where the character can sit down with another person, block his own hearing, and then practice reading the other person's lips as that person speaks. A more advanced version would be like a Conversation lab — a facility where a character could interact with actors in a faux social situation and try to read their lips.

Lockpicking: A collection of tools and practice locks, plus spare parts for building more locks if necessary. An advanced Lockpicking lab might be set up to allow a character to practice his craft under unusual circumstances (such as when hanging upside down, lying on his stomach, or the like).

Martial Arts: The simplest form of Martial Arts lab is just a dojo-like facility equipped with practice dummies, punching bags, weapons and weapon racks, a fighting ring, wall mirrors, and the like. A more advanced one comes complete with trained personnel for the character to spar against.

Mechanics: A collection of tools and spare parts for building mechanical devices, plus a collection of (possibly fake) devices a character can practice disassembling, repairing, and analyzing.

Mimicry: A simple Mimicry lab might be nothing more than a collection of recorded sounds the character can practice imitating. A more advanced one, like a Conversation lab, features hired actors in a social setting where the character has to trick them with impersonated voices or the like.

Navigation: The only way to practice Navigation properly is to get out and do it. To the extent a character could have a "lab" for this, it would be enormous areas of land where he could practice finding his way. More simply, a collection of navigational equipment and charts might function as a Navigation lab if it lets a character practice map-reading, compass use, and similar skills.

Oratory: To practice Oratory, a character needs an audience. Thus, like an advanced Acting lab, the character needs hired personnel to listen to his speeches and evaluate how strongly the character's words swayed them.

Paramedics: A typical Paramedics lab is more or less the same thing as a sickbay, infirmary, or at its most advanced a miniature hospital: a facility equipped to treat injuries and illnesses, complete with any medicines or drugs the GM deems appropriate. A more advanced Paramedics lab might include actors hired to fake illnesses and wounds

that the character can treat.

Penalty Skill Levels: A "combat gymnasium" set up so the character can practice whatever type of combat he bought the lab for. Works well in combination with labs for other Combat Skills.

Since Penalty Skill Levels don't involve rolls, and the lab itself generally shouldn't have PSLs it can provide to the Base it's a part of, characters can buy a PSL lab for 1 Character Point for a 1½- or 2-point Penalty Skill Level, or 2 Character Points for a 3-point PSL. It doesn't matter how many PSLs the character himself has, the Base just pays the cost once to represent the extent of the equipment and facilities available for practice and instruction.

Persuasion: Similar to a Conversation lab, a Persuasion lab puts a character in a social situation with hired actors. The character's mission is to persuade some of the actors to agree with his position, convincingly lie to them, or the like. The actors don't know who the character is, but respond to anyone who talks to them according the roles assigned to them.

Power: The nature of a Power lab depends on how the Skill is defined. Power: Brick Tricks might be a gymnasium-like facility built to withstand the character's enormous STR; a Power: Magic lab would be a wizard's sanctum, complete with grimoires, alchemical equipment, tomes of lore, and summoning circles built into the floor.

Professional Skill: The nature of a PS lab depends on how the Skill is defined. A PS: Blacksmith lab is a forge equipped with fire, anvil, tools, and raw materials; a PS: Play Basketball lab is a basketball court; and so on.

Rapid Attack: A Rapid Attack lab would be a combat obstacle course similar to the one described for Autofire Skills, where a character could practice moving around during combat.

Riding: A corral or other facility for keeping and caring for riding animals (and the gear needed to ride them), plus if appropriate an obstacle course where the character can practice Riding under difficult conditions, leaping over obstacles, and the like.

Science Skill: A SS lab is usually a laboratory in the literal sense of the word: a facility established for purposes of scientific research and experimentation. Depending on the type of science involved, it could include beakers, bunsen burners, supplies of raw materials, telescopes, microscopes, oscilloscopes, and numerous other devices. Laboratories for social Science Skills (like Anthropology, Archaeology, or Sociology) may just be collections of reference materials, plus perhaps simple practice areas.

Security Systems: A collection of tools and practice security devices, plus spare parts for building more security devices if necessary. An advanced Security Systems lab might be set up to allow a character to practice his craft under unusual circumstances (such as during a rainstorm, when he has to use Contortionist to reach the device, and so on).

Seduction: Generally a Seduction lab is just like a Conversation lab, but the character's goal is to make friends with or literally seduce someone, not get information from him.

Shadowing: Like Navigation, Shadowing is difficult to construct a lab for; characters usually practice in the field. However, a character with sufficient resources could construct a large "fake city" or the like (similar to those found on many movie studio lots) and hire actors to help him practice his skills.

Skill Levels: The nature of a Skill Levels lab depends on how the Levels are defined. Typically characters just buy up the roll for other labs, they don't buy "Skill Level labs" *per se*.

Since Skill Levels don't involve rolls, and the lab itself generally shouldn't have Skill Levels it can provide to the Base it's a part of, characters can buy a Skill Level lab for 1 Character Point for a 2-3 point Skill Level, 2 Character Points for a 5-point Skill Level, 3 Character Points for an 8-point Skill Level, and 4 Character Points for a 10-point Skill Level. It doesn't matter how many Skill Levels the character himself has, the Base just pays the cost once to represent the extent of the equipment and facilities available for practice and instruction.

Sleight Of Hand: A simple Sleight Of Hand lab is a collection of practice dummies and articles of clothing so the character can practice pickpocketing, decks of cards to practice card manipulations with, objects of different sizes and shapes he can practice palming, and so on. A more advanced one might be a "fake city" like the one described for Shadowing where the character would mingle with actors and practice using the Skill on them.

Stealth: A basic Stealth lab would include floors of different consistencies (and perhaps covered with various objects) that allow the character to practice stealthy movement, a series of rooms for hiding in and sneaking through, and so on. For more advanced work, a "fake city" or "fake building" populated by actors trying to find the character could really put a PC's Stealth to the test!

Streetwise: Creating a Streetwise lab is even more difficult than a High Society lab — criminals are notoriously closemouthed and uncooperative, after all. The best a character can do is something similar to a Conversation lab — a facility, perhaps designed to look like an underworld bar or the like, where a character interacts with actors hired to pretend to be criminals and lower-class people.

Survival: As with Navigation and Tracking, the best sort of Survival lab would be a large area of land (or, ideally, several large areas in various climatic and ecological zones around the world) where a character could get out in the field and really practice his skills. Characters who aren't ultra-wealthy may have to settle for a small outdoor area where they can practice starting campfires, building primitive shelters and weapons, and maybe trapping small game.

Systems Operation: Similar to a Computer Programming lab, a Systems Operation lab is typically a room filled with all sorts of communications and sensory equipment — radios, televisions, scanners, and the like. The higher the roll, the more advanced



the equipment.

Tactics: Tactics is another Skill best suited to actual practice in the field. Characters who can't afford the land and actors necessary to stage mock battles may have to settle for a large collection of wargames, military history books, and tactical reference materials they can study.

Teamwork: The classic Teamwork lab is a "danger room" — a facility where a group of characters can set up mock combat conditions and practice working together as a team. Characters who don't have access to such advanced facilities can use a combat gymnasium such as the ones described for Defense Maneuver and Martial Arts instead.

Tracking: The best Tracking practice can only be obtained in the field, so a character who wants to get really good at it may need to own large tracts of land well-populated by wild animals (and into which he can occasionally send hired people to make trails and try to avoid leaving tracks he can follow). Characters without this sort of resource may instead have to use a collection of reference books and casts to study different prints.

Trading: A Trading lab would essentially be a fake marketplace or boardroom populated by actors with whom the character negotiates. Depending on their assigned roles the actors might be stubborn, greedy, gullible, and so on.

Transport Familiarity: To the extent characters can have or need a TF lab, it would resemble a Combat Driving/Piloting or Riding lab, but with far fewer resources — the character only needs to know how to operate the vehicle under normal conditions, after all.

Two-Weapon Fighting: Characters practice Two-Weapon Fighting in "combat gymnasiums" and firing ranges similar to those described for Autofire Skills, Martial Arts, and other Combat Skills.

Ventriloquism: Like a Persuasion lab, a Ventriloquism lab is a social setting with actors whom the character tries to fool by throwing his voice. The actors don't know what the character wants to practice, thus allowing him to determine if their reaction to his use of the Skill is genuine.

Weapon Familiarity: To the extent characters can have or need a TF lab, it would resemble an Autofire Skills or Martial Arts lab — a collection of the appropriate type of weaponry and the facilities to practice using it. An advanced WF lab might include sparring partners to give the character some "live" weapons practice.

Weaponsmith: Depending on the type of weapons involved, a Weaponsmith lab could be a blacksmith's forge, a gunsmith's workshop, or a ballistic missile engineer's laboratory.

SKILL GEAR



Several of the Skill descriptions in Chapter Two include *HERO System* writeups of relevant equipment, such as security devices for Security Systems or parachutes for Parachuting. This section primarily contains devices, gadgets, and tools characters can use with Skills, often to make them easier to perform.

SKILL KIT

Effect: +1 with defined Skill
Target/Area Affected: Self
Duration: Persistent
Range: Self
END Cost: 0
Breakability: 1 DEF

Description: This writeup represents a generic "Skill kit" — a collection of special, better-than-average quality tools and supplies that help a character use his Skill. All you have to do is define which Skill it applies to when you buy it (such as Demolitions Kit, Interrogation Kit, Mechanics Kit, or Paramedics Kit). It can apply to most Skills, but the GM has the final say. (For Skills that have specific rules for equipment bonuses, like Climbing, either adjust this writeup or use a Skill-specific writeup below if available.)

In some cases the materials that come with a Skill Kit may get used up. For example, the drugs and bandages in a Paramedics Kit run out after a while, requiring the character to replace them. This generally doesn't qualify for the *Charges* Limitation unless the GM rules that the character has so few supplies that he has to replace them practically every day.

Of course, a Skill Kit doesn't necessarily have to be a literal "kit." A special "sonic multi-tool" in a Science Fiction campaign might qualify as a Skill "Kit" for Electronics or Security Systems, for example.

The bonus bought for this basic Skill Kit equates to the lowest level of the "Good" equipment modifier listed on page 34. The options describe how to buy even better equipment. Thus, by buying a Skill Kit, a character effectively guarantees that he always has at least "Good" or better equipment to work with. (In game terms, he gets the bonus he paid for; he doesn't get both the purchased bonus and the Skill Modifier bonus.)

Game Information: *+1 to defined Skill (2 Active Points); OAF (-1). Total cost: 1 point.*

Options:

1) Better Skill Kit: Increase to +2 with defined Skill. 4 Active Points; total cost 2 points.

2) Really Good Skill Kit: Increase to +3 with defined Skill. 6 Active Points; total cost 3 points.

3) Very Good Skill Kit: Increase to +4 with defined Skill. 8 Active Points; total cost 4 points.

4) Extremely Good Skill Kit: Increase to +5 with defined Skill. 10 Active Points; total cost 5 points.

5) Multi-Skill Skill Kit I: Instead of just applying to one Skill, the character's Skill Kit applies to three related Skills:

Good Kit: +1 with three related Skills. 3 Active Points; total cost 1 point.

Better Kit: +2 with three related Skills. 6 Active Points; total cost 3 points.

Really Good Kit: +3 with three related Skills. 9 Active Points; total cost 4 points.

Very Good Kit: +4 with three related Skills. 12 Active Points; total cost 6 points.

Extremely Good Kit: +5 with three related Skills. 15 Active Points; total cost 7 points.

6) Multi-Skill Skill Kit II: The character's Kit applies to all Skills of a given category (*e.g.,* all Technological Skills, or all Intellect Skills), subject to the standard rules for this type of Skill Level.

Good Kit: +1 with all Skills of a defined category. 5 Active Points; total cost 2 points.

Better Kit: +2 with all Skills of a defined category. 10 Active Points; total cost 5 points.

Really Good Kit: +3 with all Skills of a defined category. 15 Active Points; total cost 7 points.

Very Good Kit: +4 with all Skills of a defined category. 20 Active Points; total cost 10 points.

Extremely Good Kit: +5 with all Skills of a defined category. 25 Active Points; total cost 12 points.

7) Concealed Skill Kit: This form of Skill Kit is meant to be hidden, or is constructed to look like some mundane object. (See also *Concealed Lockpicks,* below, for another approach to creating concealed Skill gear.) Change OAF (-1) to IAF (-½). Total costs are:

Good Kit: 1 point

Better Kit: 3 points

Really Good Kit: 4 points

Very Good Kit: 5 points

Extremely Good Kit: 7 points



CLIMBING — CLIMBING GEAR

Effect: +3 to Climbing
Target/Area Affected: Self
Duration: Persistent
Range: Self
END Cost: 0
Breakability: 1 DEF

Description: This writeup represents the "Basic" climbing equipment described on page 109, such as a rope and grapnel. The options listed below describe more advanced climbing gear.

Game Information: *+3 to Climbing (6 Active Points); OAF (-1). Total cost: 3 points.*

Options:

1) Advanced Climbing Gear: Increase to +6 with Climbing. 12 Active Points; total cost 6 points.

2) Very Advanced Climbing Gear: Increase to +12 with Climbing. 24 Active Points; total cost 12 points.

3) Climbing Shoes or Climbing Claws: Character also buys: +1 with Climbing (2 Active Points); OIF (-½). Total cost: 1 point.

GAMBLING — GAMBLING RIG

Effect: +3 with Gambling, Only To Cheat At Card Games
Target/Area Affected: Self
Duration: Persistent
Range: Self
Charges: 1 Recoverable Charge (see text)
Breakability: 1 DEF

Description: Gamblers in the Wild West sometimes wore elaborate rigs under their clothing. By moving their arms or legs just so, they could cause the rig to drop a card into their hands so they could win. The device comes with one card (which must be chosen in advance) in it. When the character uses the rig, he can make a Sleight Of Hand roll to take the card it gives him and replace it with another he already has in his hand, saving that card for later use. Of course, the device only works if the card put in the rig to begin with matches the cards used at the table in terms of appearance.

Game Information: *+3 with Gambling (6 Active Points); IIF (-½), Only To Cheat At Card Games (-½), Requires A PS: Use Gambling Rig Roll (-¼), 1 Recoverable Charge (see text; -1¼). Total cost: 2 points.*

Options:

1) Computerized Rig: Modern card sharps sometimes use microcomputers built into their shoes and other items of apparel to count cards, giving them a real edge when playing blackjack. Change to: +3 with Gambling (6 Active Points); IIF (-½), Only To Cheat At Blackjack (-1), Requires A PS: Use Gambling Rig Roll (-¼). Total cost: 2 points.

GAMBLING — MARKED CARDS

Effect: +2 with Gambling, Only To Cheat At Card Games
Target/Area Affected: Self
Duration: Persistent
Range: Self
END Cost: 0
Breakability: 1 DEF

Description: The character has a set of subtly-marked cards. When he plays with them, he can "read" the markings on the backs of the cards to know what each opponent has in his hand, thus making it much easier for him to win.

Game Information: *+2 with Gambling (4 Active Points); IAF (-½), Only To Cheat At Card Games (-½). Total cost: 2 points.*

LOCKPICKING — LOCKS

Effect: Lockpicking 8- (or better)
Target/Area Affected: One door or locked object
Duration: Persistent
Range: Self
END Cost: 0
Breakability: 1 DEF

Description: If the GM wants to use the "Simplified Lockpicking" rules from Chapter Two, here's what various categories of lock would cost. The costs are listed unmodified (since they're primarily for use with Vehicles, Bases, and the like); the GM can easily apply a *Focus* Limitation to them if desired.

Game Information: *Lockpicking 8-. Total cost: 1 point.*

Options:

1) Higher-Quality Locks: The lock listed above is a "Poor"-quality lock — the sort of lock that any Vehicle or Base might have as "Everyman equipment." Here's what better locks cost:

Average Lock: Lockpicking 11-. Total cost: 7 points.

Above Average Lock: Lockpicking 14-. Total cost: 13 points.

High Quality Lock: Lockpicking 17-. Total cost: 19 points.

Very High Quality Lock: Lockpicking 20-. Total cost: 25 points.

Superb Lock: Lockpicking 23-. Total cost: 31 points.

LOCKPICKING — CONCEALED LOCKPICKS

Effect: Concealment 16-, Only To Hide Lockpick Set
Target/Area Affected: Self
Duration: Constant
Range: Self
END Cost: 0
Breakability: 1 DEF

Description: A character may need to carry a set of lockpicks into a location without anyone detecting them. This set is specially concealed inside a pen or like object. Since characters don't normally pay Character Points for ordinary tools, it's bought as a highly-Limited form of Concealment; for tools characters pay points for (such as lockpicks good enough to provide a Skill Roll bonus), you can simply buy them as IAFs instead of OAFs.

Characters can use this writeup buy "concealed" versions of the equipment for other Skills — just change the name of the Skill in the Limitation.

Game Information: *Concealment 16- (17 Active Points); IAF (-½), Only To Hide Lockpick Set (-2). Total cost: 5 points.*

NAVIGATION — ADVANCED GPS DEVICE

Effect: Navigation (Land) 16-
Target/Area Affected: Self
Duration: Persistent
Range: Self
Charges: 1 Continuing Fuel Charge (6 Hours)
Breakability: 3 DEF

Description: As discussed on page 241, a basic GPS device is bought as an Enhanced Sense (Detect Exact Position On Earth). But many GPS devices have built-in computers with mapping software and other features that make it a snap for the user to find his way from one place to another even if he doesn't understand the latitude/longitude system. The battery has enough power for six hours of continuous operation; the user recharges it by plugging the device into any electrical outlet.

Game Information: *Navigation (Land) 16- (17 Active Points); OAF (-1), Affected As Sight And Radio Sense Group (-½), Extra Time (Full Phase to use; -½), 1 Continuing Fuel Charge (6 Hours, easily recharged; -0). Total cost: 6 points.*

SECURITY SYSTEMS — SECURITY DEVICES

Effect: Security Systems 8- (or better)
Target/Area Affected: One door, room, fence, or secured object
Duration: Persistent
Range: Self
END Cost: 0
Breakability: 1 DEF

Description: If the GM wants to use the "Simplified Security Systems" rules from Chapter Two, here's what various categories of security device would cost. The costs are listed unmodified (since they're primarily for use with Vehicles, Bases, and the like); the GM can easily apply a *Focus* Limitation to them if desired.

Game Information: *Security Systems 8-. Total cost: 1 point.*

Options:

1) Higher-Quality Devices: The security device listed above is a "Poor"-quality one — the sort of alarm that any Vehicle or Base might have as "Everyman equipment." Here's what better security devices cost:

Average Security Device: Security Systems 11-. Total cost: 7 points.

Above Average Security Device: Security Systems 14-. Total cost: 13 points.

High Quality Security Device: Security Systems 17-. Total cost: 19 points.

Very High Quality Security Device: Security Systems 20-. Total cost: 25 points.

Superb Security Device: Security Systems 23-. Total cost: 31 points.

STEALTH — CAMOUFLAGE CLOTHING

Effect: +2 with Stealth and Concealment rolls; Only In Specific Environments/Situations Environment
Target/Area Affected: Self
Duration: Persistent
Range: Self
END Cost: 0
Breakability: 1 DEF

Description: The character has clothing that's designed to help him blend into a particular environment, such as the jungle, the desert, or urban areas.

Game Information: *+2 with Stealth rolls (4 Active Points); OIF (-½),Only In Specific Environments/Situations (-1) (total cost: 2 points)* ***plus*** *+2 with Concealment rolls (4 Active Points); OIF (-½), Self Only (-½), Only In Specific Environments/Situations (-1) (total cost: 1 point). Total cost: 3 points.*

Options:

1) Even Better Camo: Increase to +3 with both rolls. 6 + 6 = 12 Active Points; total cost 2 + 2 = 4 points.

2) Worse Camo: Decrease to +1 with both rolls. 2 + 2 = 4 Active Points; total cost 1 +1 = 2 points.

STEALTH — SNEAKY SHOES

Effect: +2 with Stealth rolls; Only To Move Silently
Target/Area Affected: Self
Duration: Persistent
Range: Self
END Cost: 0
Breakability: 1 DEF

Description: The character has a special pair of soft-soled, non-squeak shoes that make it easier to walk without creating any noise.

Game Information: *+2 with Stealth rolls (4 Active Points); OIF (-½), Only To Move Silently (-½). Total cost: 2 points.*

Options:

1) Even Sneakier Shoes: Increase to +3 with Stealth rolls. 6 Active Points; total cost 3 points.

2) Less Sneaky Shoes: Decrease to +1 with Stealth rolls. 2 Active Points; total cost 1 point.

chapter four:





ADVENTURING WITH SKILLS

SKILLS IN COMBAT



Most Skills aren't primarily intended for use in combat or similar "crisis" or "high-pressure" situations. Using them in combat entails a -1 to -3 penalty. Since Combat Skills don't involve Skill Rolls, they're an exception to this; other exceptions are listed on page 33.

Here are some additional issues to consider regarding the use of Skills in combat and adventuring situations.

ENTERING COMBAT

MULTIPLE-POWER ATTACKS

If the GM doesn't want to allow multiple-power attacks as a routine matter, he might consider allowing characters to buy a Skill similar to Two-Weapon Fighting that would let them make multiple-power attacks with one or more combinations of powers. For example, perhaps a character has to pay 5 Character Points for each multiple-power attack combination he wants to use. Another possible cost structure would be X points for the first combination, then +Y points for each additional combination. The GM should set the cost for this Skill to maintain campaign balance.

ACTING FIRST

See page 180 regarding the use of Fast Draw in situations where there's some issue regarding the exact timing of two or more characters' Actions. In some rare cases the GM might consider using combat-oriented Analyzes (like Analyze Style) or even Tactics in a similar way.

ABORTING ACTIONS

Generally characters cannot Abort to use Skills; they're not considered "defensive." Defense Maneuver tends to be "active" at all times anyway, and character can Abort to allocate Combat Skill Levels to DCV. The GM can allow characters to Abort to other Skills if that seems appropriate — for example, in some cases maybe the GM would let a character Abort to Stealth to keep from being seen by an attacker (thus "protecting" him from that person's assault).

MOVEMENT

See *The Ultimate Speedster* and *The Ultimate Vehicle* for expanded rules regarding movement in the *HERO System,* some of which may have Skill-like aspects (or which could be made to function as Skills by GM ruling or the application of the *Requires A Skill Roll* Limitation).

FIGHTING

If the GM wants to "unify" the *HERO System* dice-rolling mechanics a little, he should consider using the alternate Attack Roll method described at the very bottom of page 371 of *The HERO System 5th Edition, Revised.* It treats the standard Attack Roll more like a Skill Roll.

COMBAT MODIFIERS

Most Combat Modifiers are examples of the sorts of penalties characters buy Penalty Skill Levels to counteract. Exceptions include Autofire (for which characters must buy Autofire Skills), Environmental Conditions (for which characters must buy the *Environmental Movement* Talent), and Unfamiliar Weapon (which characters can only counteract by buying an appropriate Weapon Familiarity). See page 248 for more information.

COMBAT MANEUVERS

See page 63 regarding converting Optional Combat Maneuvers into Skills.

Grab

Characters can apply the following types of Combat Skill Levels to a Throw made after Grabbing someone:

■ CSLs with HTH Combat

■ CSLs specifically bought for throwing Grabbed characters

CSLs for Grab would *not* apply, since this is a Throw, not a Grab. CSLs bought for Throw-based maneuvers (such as Martial Throw) do not apply, since a Throw after a Grab isn't a Throw-based maneuver.

Characters could apply the following types of Combat Skill Levels to a Squeeze made after Grabbing someone:

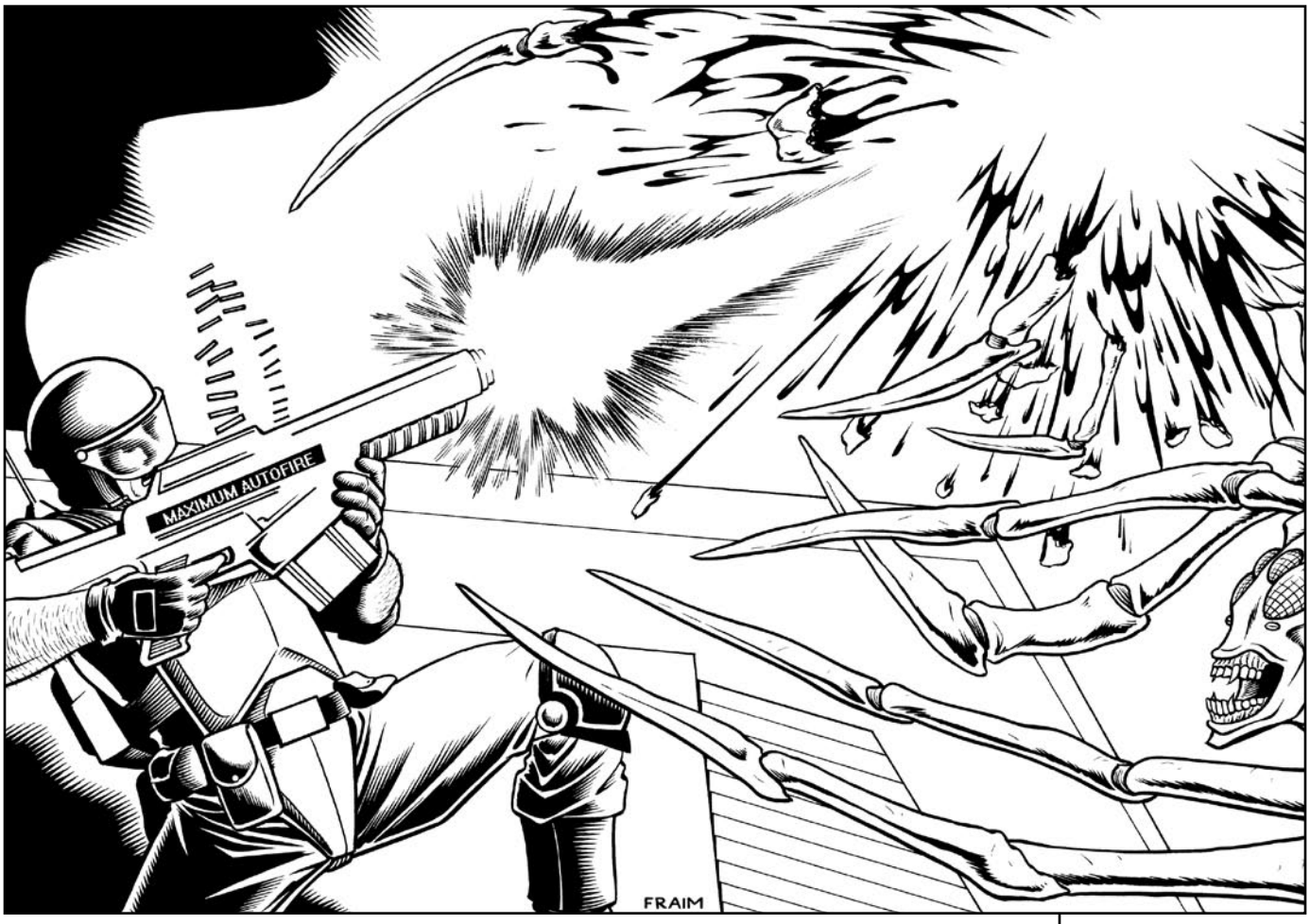
■ CSLs with HTH Combat

■ CSLs specifically bought for squeezing Grabbed characters

CSLs for Grab do not apply, since this is a Squeeze, not a Grab.

Cover

At the GM's option, characters could use any of the following Skills to create a sufficient distraction to escape from being Covered: Acrobatics; Contortionist; Fast Draw; Sleight Of Hand; Stealth; Tactics. In this case the character's Skill Roll takes the place of his DEX Roll in the Skill Versus Skill Contest to determine what happens.



Dive For Cover

A character cannot apply any type of Combat Skill Levels to the DEX Roll he makes when Diving For Cover, since CSLs only affect CV. Nor can a character buy 2-point Combat Skill Levels with Dive For Cover, since that type of Level only affects OCV. However, he can apply 3-point and more expensive CSLs to increase his DCV while Diving For Cover, if appropriate.

If a character has Skill Levels that can apply to DEX Rolls, he may use those to improve his DEX Roll when Diving For Cover, provided he has not already allocated them in the Segment when he uses the Maneuver. Typically this does *not* include Skill Levels with all Agility Skills or all noncombat Skills, since a DEX Roll is a Characteristic Roll, not a Skill Roll. The GM can, at his option, treat the DEX Roll as an "Agility Skill" roll, thus allowing 5-point Agility Skill Levels or 8-point All Non-Combat Skills Levels to apply, but this is not recommended.

Hurry

A character can buy Combat Skill Levels with Hurry to partly or fully counteract the CV penalty it imposes, but any such CSLs cannot be used to counteract the penalties Hurry imposes on Skill and Characteristic Rolls. Characters can buy Skill Levels to counteract those, but any such Skill Levels have no effect on CV.

Rapid Fire, Sweep

A character could buy 2-point CSLs just to improve his OCV with Rapid Fire or Sweep, regardless of what type of weapon or attack he Rapid Fires with. If he buys 3-point CSLs with Rapid Fire (or more expensive CSLs that could apply to Rapid Fire/Sweep), he can use them to increase his OCV and/or DCV with Rapid Fire/Sweep (but note the DCV Checklist on page 372 of *The HERO System 5th Edition, Revised,* which in effect halves any Levels applied to DCV).

If a character has 2-point (or more expensive) Combat Skill Levels with an attack, can he apply those Levels to his OCV when Rapid Firing/Sweeping with that attack.

If a character uses a Combat Skill Level to increase the damage done by, or his OCV with, a Rapid Fire/Sweep attack, the CSL applies to every "shot" that hits the target. He doesn't have to divide his CSLs among the shots. As always, the GM may change this rule if he finds it unbalancing.

ENVIRONMENT



Usually characters adventure in the open air on Earth — but sometimes their adventures take them far afield, to strange places with very different environments. Here are some rules for using Skills in those situations.

GRAVITY

The following rules apply to using Skills in gravities other than the standard Earth 1.0 G. See *Star Hero,* pages 278-81, for more rules about functioning in alternate-gravity environments.

HIGH GRAVITY

Gravities above 1.0 make it harder for characters to move. For 1.1 to 2.0 G, Skills involving full-body movement (such as Acrobatics, Breakfall, Climbing, and most uses of Stealth) suffer a -1 penalty; for each 1.0 G (or fraction thereof) above 2.0, increase the penalty by -1. The GM may require characters to make DEX Rolls at that penalty to use Skills like Defense Maneuver that involve movement but don't have a roll, or that involve something less than full-body movement (such as Sleight Of Hand).

As discussed on page 278 of *Star Hero,* high gravity increases the amount of Encumbrance a character suffers from carrying things. This penalty is in addition to any high gravity penalties discussed above. And in environments with really high gravity, characters may have to make STR Rolls to move at all!

LOW GRAVITY

Conversely, gravities below 1.0 G tend to make it easier to use full-body movement Skills like Acrobatics, Breakfall, and Climbing, providing a +1 to +2 bonus. Other Skills, like Stealth or Sleight Of Hand, may not suffer any penalty but get no bonus (since the character has to be careful not to move in the wrong way and mis-use his Skill).

ZERO GRAVITY

The standard Skill Roll and OCV penalty for all activity in zero gravity (*a.k.a.* free fall) is -3; the standard DCV penalty is ½ DCV (this applies even to Skills that get a bonus in low gravity). Characters can overcome this penalty in two ways. First, they can buy the *PS: Zero-G Operations* Skill (see page 45 of *Star Hero;* the GM might even convert this into an Agility Skill in games featuring a lot of zero-G activity). This method is the most "realistic," and is best suited for characters used to normal gravity but trained for zero-G work. Second, they can buy the *Zero-G Training* form of Environmental Movement (*The HERO System 5th Edition, Revised,* page 89). This costs 4 Character Points and automatically cancels all Skill Roll and CV penalties caused by zero-G. This method is most appropriate for characters born to a zero-G environment, or who spend virtually all of their time in one (such as Spacers, page 32 of *Star Hero*).

UNDERWATER

Unless noted otherwise below, characters can use Skills normally underwater. As always, the GM may impose modifiers to reflect existing circumstances. See *Hidden Lands,* pages 30-42, for more information about the underwater environment.

Characters born and bred in underwater environments (such as Atlanteans) are assumed to have learned "underwater" versions of their Skills, and to use equipment appropriate for the underwater environment. If they try to use their Skills or equipment in the air, they may experience difficulties of their own.

EQUIPMENT-ORIENTED SKILLS

Skills that require equipment, or usually involve equipment, may not work well underwater if the equipment isn't adapted for underwater use. For example, lockpicks work just as well underwater as on the surface, but the makeup and prostheses used with Disguise melt away or fall off when the character submerses himself in water. Characters may have to obtain appropriate underwater equipment to use certain Skills (like Disguise) underwater. Conversely, Atlantean characters may need "surface versions" of their typical underwater gear if they venture onto land.

INTERACTION SKILLS

If characters cannot easily communicate underwater (see *Perception And Communication* on page 32 of *Hidden Lands*), they may find it harder to use Interaction Skills. The GM should impose penalties of -2 to -5, as appropriate.

PERCEPTIVE SKILLS

Many Skills require the character to perceive something (*e.g.,* Lipreading), or require the "target" of the Skill to be able to perceive the character (*e.g.,* Acting, Disguise, or Mimicry). If appropriate, the GM may impose the standard underwater PER Roll penalties (see *Perception And Communication* on page 32 of *Hidden Lands*) to such rolls.

ACROBATICS

Characters generally can't use Acrobatics underwater; the water impedes their motion too much. At the GM's option, a character can succeed with an Acrobatics maneuver if he makes his roll at -5. The GM may choose not to apply this penalty if the character has either (a) the *Aquatic Movement* form of Environmental Movement (see below), or (b) has bought his Running with the *Usable As Swimming* Advantage.

Characters who are native-born underwater dwellers (such as Atlanteans) can perform Acrobatics underwater — *Aquabatics,* if you will — without penalty, as if they were in air. However, if they try to use their Acrobatics in air, they suffer the same penalties a surface-dweller does underwater, unless they buy the *Surface Movement* form of Environmental Movement (see below) or some other ability to negate this problem.

BREAKFALL

Breakfall is *easier* to use underwater, because water slows down movement. Characters can use the Skill normally and usually receive a +2 bonus to rolls.

On the other hand, who are native-born underwater dwellers (such as Atlanteans) have trouble using Breakfall in the air because they're not used to the way they move in a non-liquid environment. They suffer a -2 penalty to all Breakfall rolls unless they buy the *Surface Movement* form of Environmental Movement (see page 36 of *Hidden Lands*) or some other ability to negate this problem.

CRIMINOLOGY, FORENSIC MEDICINE

Water quickly washes away or alters trace evidence of a crime. Therefore these Skills may often prove useless... or at the very least, suffer -3 or greater penalties.

DEMOLITIONS

If an explosive requires fire or heat to ignite/detonate, it won't work underwater unless the character has some source of flame that functions underwater. Water may also prevent electrically-detonated explosives from working.

FAST DRAW

It's tough to move really fast underwater. This Skill suffers a -2 penalty.

GAMBLING

Since characters who live underwater can't use paper, their Gambling games would likely involve dice carved from stone or bone, cards made of metal foil or bone plaques, or the like. This may impose penalties on characters used to working their wiles with standard gaming devices (at least until they've had an hour or two of play to get used to them).

HIGH SOCIETY

Surface-dwellers who use High Society in underwater communities suffer a -2 penalty due to cultural and physical differences (the GM may reduce or eliminate this penalty after the character has time to adapt to the underwater culture, and should remove it entirely for characters with appropriate KSs). Water-dwellers suffer the same penalty in surface society.

LANGUAGE

Underwater dwellers likely speak their own language(s) (such as Atlantean, described on page 16 of *Hidden Lands*). Surface-dwellers who wish to learn these languages typically have to pay double the normal cost due to the difficulties of speaking underwater, learning how to use any associated hand-gestures, and so forth. (Underwater languages are usually considered completely unrelated to any surface languages, and vice-versa.)

MARTIAL ARTS

See *Underwater Combat* on page 40 of *Hidden Lands* for expanded rules on using Combat and Martial Maneuvers underwater.

MIMICRY

Mimicry depends on the ability to communicate and to perceive, both of which are difficult underwater. At a minimum, Mimicry rolls suffer the standard underwater Hearing PER Roll penalty (see *Perception And Communication* on page 32 of *Hidden Lands*). However, if a character succeeds with his Mimicry roll, he may be able to take advantage of the fact that surface-dwellers can't always hear clearly and aren't aware of exactly how things should sound in the water. If appropriate, the GM may impose an additional penalty on the target's Hearing PER Roll to determine that the mimicked sound is false.

TRACKING

Characters cannot use Tracking to follow someone who's swimming through the water. Tracking only works underwater if the character can follow footprints or other marks on the ocean floor, Atlantean flagstones, or the like. Even then, the motion of the water may quickly obliterate or alter tracks; the GM can impose a -1 to -3 penalty, as appropriate.

VENTRILOQUISM

Because sound travels through water more easily than it does through air, characters find this Skill easier to use. The distance penalty for Ventriloquism underwater is only -1 per 3" (instead of the usual -1 per 1").

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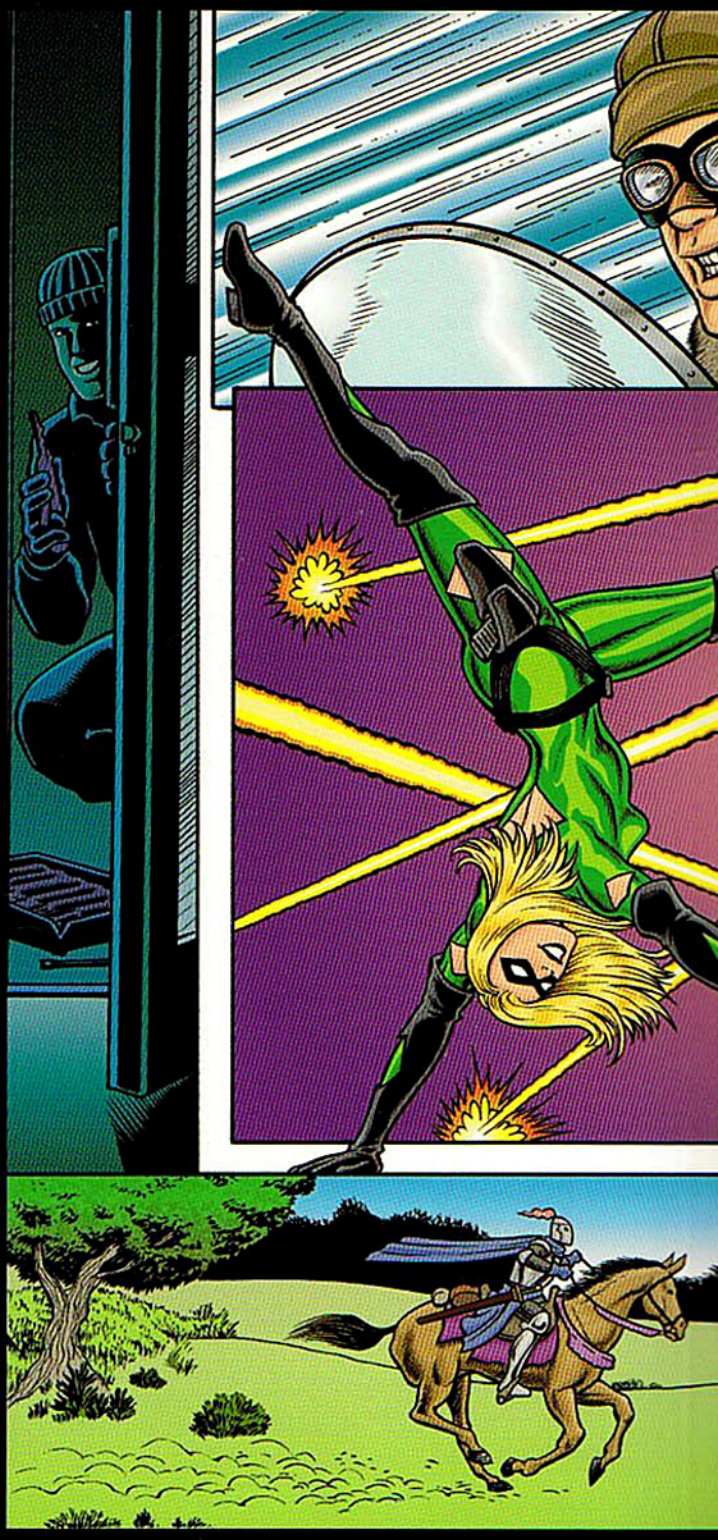
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