

Alternate Realities: Primary Reality Guide

A Role-Playing System by Carter Butts, Karim Nassar, and Brian Rayburn

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Acknowledgments

Thanks to Terry Dawson, and the Linux Documentation Project, for their support of the free distribution of information, and for the above permission notice (which is a modified version of that contained in Dawson's IPX HOW-TO). Support Linux, the operating system of champions!

Thanks to all those who have had to put up with the authors' AR obsession.

And, naturally, thanks to Gary Gygax, Steve Jackson, Kevin Seimbeda, and all the other game designers whose work has provided us with such inspiration and enjoyment over the years.

Forward to Version 1.0

Believe it or not, this project has been six years in the making. It all started with a series of conversations between Karim and myself regarding an automated world creation system (something which, amusingly, we still have not developed). Around this time, Karim had gotten an earlier system of his own called *Guardian Dome: 2020* (soon to be an *AR Reality Guide*) to the point of playability, and we began to talk about possible improvements. Eventually, our discussion turned to the subject of creating the Perfect Role-Playing Game (TM), and before long we had resolved to create a new, generic system incorporating some of the lessons learned both from *GD* and from other systems. After much wrangling, we decided to call this system *Alternate Realities*, and the project was born.

A lot has happened since then. Countless “visions, and revisions, which a minute will reverse” ensued...since these often took the form of my coming in and babbling to Karim about how we needed to scrap everything we had (painstakingly put together by Karim) in favor of the Idea of the Day, I’m somewhat surprised that I survived. Often, *AR* got put on the back burner, and I think that neither of us really believed that it would one day be completed. Renewed interest in the past few months, and a new sense of urgency due to our various pending relocations, however, provided the spur to drive us to action: *AR* had to be finished, and soon.

At this point in the narrative, however, I need to back up and mention Brian, who got involved somewhere along the line vis a vis Karim’s play tests. Brian took to *AR* at once, and began to help with play testing, design, and (especially) content. When things began to get really hectic, Brian took on an increasingly important role; when Karim departed for Japan, it was Brian who put together the lists of skills and equipment without which the project never could have come to completion, and who is hence no less of an author for having come into the project half-way.

So, where does that leave us? The end of the beginning, I should think...which is as good a place to be as any. Having cobbled together version 1.0, I may be able to once again sleep nights without worrying about when this thing will be finished. On the other hand, if we’ve done our work well, *Alternate Realities* will *never* be finished - which is fine by me. I’ve seen too many closed systems in my time, too many designers who sue players over copyrights, and too many Megacorps where the Elite dole out gaming wisdom to the masses. It’s time for gamers to have something which belongs to them...and that’s what *AR* is all about.

Enjoy!

-Carter Butts

Alternate Realities

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Introduction

Alternate Realities is a generic, copylefted role-playing system with scaleable, modular rules which allow for a wide variety of gaming styles. Whether you are into fantasy or sci-fi, detailed simulation or free-form story telling, *AR* can provide the basis for your campaign.

This alone is somewhat unusual, though not totally unique. Unlike most systems, however, *Alternate Realities* is built around a few, general principles which form the basis for all other game mechanics. This is a boon to new players, who can get by without learning a vast array of disparate rules, and to designers, who can easily extend the *AR* framework to produce new game environments.

There is, also, an aesthetic method to our madness. In producing *Alternate Realities*, the authors have striven for *elegant* solutions to design issues; while we may not always have been successful, we feel that *AR* is generally more compact and intuitive than other systems of comparable sophistication. Even when it is not, however, we have tried to make it clearer to players and GMs by providing detailed explanations of how we arrived at the present rule system. By deriving the more obscure aspects of *AR* (such as the Diminishing Returns Function) in the rule book itself, we hope to encourage others to build on our work...and to correct its shortcomings.

To further aid players in adding to *Alternate Realities*, we have included a section on writing for *AR*, with tips on how to organize your work so that other players can derive maximum utility from it. If you do decide to produce work for *AR*, please let us know; we'd love to hear about it, and will be happy to help you distribute your creations to other gamers. Our ultimate intention is for this work, the *Primary Reality Guide*, to be the start of a much larger collaborative project, much as the work of Linus Torvalds began what is today known as the "Linux Movement." We're not holding our breaths, however.

In any case, we certainly hope that you enjoy *Alternate Realities*, and that you copy and distribute it freely to anyone and everyone you know. It's not a perfect system, but we think you'll find it to be most effective.

-The Authors

Basic Ideas

This section of the *Primary Reality Guide* serves to introduce the basic concepts which undergird *Alternate Realities*. While it is not essential that these ideas be grasped in their entirety (as players can always rely on the *How Tos*), it is recommended that players and GM's give this section at least a modest read. Reality designers will want to make full use of this material in their work.

The Primary Reality

As the name implies, *Alternate Realities* is a role-playing system which allows players to explore virtually any conceivable setting. However, in order to establish a "baseline" or frame of reference from which to describe the many worlds of AR, we've found it helpful to designate one such world - the "real" world - as the Primary Reality. This doesn't mean that most (or, really, any) AR play is expected to take place in this reality (after all, we can do that at home!), but rather it means that all other realities are defined by how they differ from the real world. The Primary Reality, then, can be thought of as a sort of "default condition" for the way things work, particularly objects (which are described in more detail below).

The Universal Rule of Objects

Most game systems have many different rules for dealing with characters, NPC's, automatons, spell constructs, active processes, etc. While this is often sufficient for playing purposes, it can lead to a confusing proliferation of rules which is burdensome to players and GM's alike. In order to avoid this, AR uses a single set of rules to deal with all game entities: we call this the *Object System*.

What, then, is an *object*? For our purposes, an object is any "thing" in the game world, whether it happens to be a character, a rock, or a wall of black IC. All objects are considered to have certain properties, or *attributes*, which (along with the will of the GM, and the efforts of the players) determine how the objects behave. Hence, a blowtorch is a certain kind of object with a number of attributes, perhaps most importantly the ability to (under the right conditions!) produce a very hot flame. If a player wants to get into a locked room, he may have his character employ a blowtorch to burn through the lock. In that case, the blowtorch object is used to inflict plasma and heat damage on the door object; the particular properties of the door (including its composition, thickness, etc.) will decide whether the door yields, catches fire, or simply gets very hot.

If you've made it this far, you already know enough to be able to understand how game play is set up. But if you're interesting in being a GM, especially if you want to design your own reality module, then there's another property of objects which you'll need to be aware of: inheritance. To understand how this works, think of yourself. You are a "child" of your "parents", and hence have *inherited* some of their attributes (such as having a head, spine, bilateral symmetry, etc.). In a similar way, objects can be said to be *children* of *parent* objects, from which they *inherit* certain characteristics. In this case, however, the parentage is conceptual, not real. :-) In *Alternate Realities*, objects are often thought of as being children of a more general "generic" object, which is in turn "descended" from still more generic objects, from which it gets its properties.

Confusing? Well, let's consider an example: a simple katana. This katana is a child of the "generic" katana (from whom it inherits its "katananess", if you will), which is in turn a child of the generic "sword", which is a child of generic steel objects, which is a child of metal objects, etc.,

etc., etc. As you follow the chain of inheritance, you find that the final object gains more and more specific properties, many of which are shared with "siblings" who share parents. How does this affect game play? Not directly. A katana has the same properties whether you think of it as having a "pedigree" or not; however, the parent/child relationship *can* be a big help to the GM when planning and executing campaigns.

The idea? By using the wide range of generic objects already outlined for you in the *Primary Reality Guide* (and with more included in subsequent reality guides), you can very quickly and easily come up with realistic properties for an item to have, *even when you make it up on the fly*. That way, when your players encounter a thug with an unusual foreign sword (which you forgot to detail beforehand) and one of the characters attempts to cut it with a laser, you can quickly and realistically determine how the sword reacts by backing up to the generic sword object and modifying its properties slightly. By the same method, you can deal with all manner of unusual and unexpected adventure twists without having to waste precious time deliberating over "what ought to work" and without running the risk of losing realism.

By the same token, the inheritance system is a great tool for designing new reality modules, as you can use slightly modified generic objects to give your world richness and depth without having to redesign everything from scratch. As always, it is not necessary to use this part of the AR system; it can be wholly ignored, if desired. In many cases, however, it may prove useful to a busy GM to have it available, and reality designers will most likely find it to be indispensable.

If all this seems pretty straightforward, great. If not, don't worry: the concepts should become clearer with time. For now, just keep in mind that anything which can take action (or be affected by some action) in the game world is considered an object, that the behavior of an object is determined by its attributes, that a single set of rules is used to govern the interactions between objects, and that you can think of objects as being "descended" from more and more generic versions of themselves, from which they inherit some of their attributes.

The Law of Diminishing Returns

If there is any premise in AR as fundamental as that of the object system, it is AR's use of *Diminishing Returns*. Diminishing returns is the idea that the marginal performance for a given amount of effort decreases as the level approaches its physical maximum; in other words, the closer you get to perfection, the more effort it takes to draw still closer to it.

A simple example of this effect can be observed in pursuits such as weightlifting. There is a physical limitation to how much weight the human structure can bear; a beginning weight lifter can make large increases in strength when he first starts lifting, but as he nears this plateau the same level of improvement requires a much greater effort.

Similarly, a person learning basic chemistry learns very quickly at first -- there is a great deal for him to learn -- but as he reaches the more advanced levels of learning, the subject of chemistry becomes much more complicated and intensive, and the rate of learning slows.

The AR system deals with this phenomenon by making all attributes and skills nonlinear. Because the type of nonlinearity needed for diminishing returns would be difficult to produce with a simple rolling system, we have developed a method of converting all attributes, skill targets, and modifiers to a percentile range during play; hence, the players need only use percentile dice, but can still enjoy the benefits of the nonlinear system. If this sounds complex or confusing, don't worry: the technique is simple, fast, and easy to use.

The method of conversion is a function known, appropriately enough, as the *Diminishing Returns Function* (DRF). The DRF maps *ratings* into *percentiles*; to use it, you plug the rating in one end and get the percentile out the other. This can be done three ways: the DRF graph, the DRF table, or (for the dedicated) execution of the DRF using a computational device.

The first method of using the DRF is consulting the DRF graph. This is simply a plot of the DRF, with ratings on one axis and percentiles on the other. To use it, find the rating needing conversion on the rating axis, and then find the value of the function at this point. This is the percentile target. This can also be done in reverse, if needed: simply find the percentile you are interested in, and find the rating which corresponds with it. This process is quick, and is helpful early on to get a feel for what the DRF “looks like”. More experienced players may prefer to use one of the other methods here considered.

Using a DRF table is very similar to using the DRF graph: one finds the rating one wishes to convert, and then simply notes the percentile which corresponds with it. While this does not offer the same “perspective” as the DRF graph, it is faster and offers the most straightforward means of getting target percentiles. This may be appreciated by some beginners, who may find use of the graph to be confusing.

The final method of using the DRF is to employ a computational aid (such as a programmable calculator or computer program) to compute results in real-time. There are some advantages to this method: it is as precise as needed with no loss of time, and allows for the integration of the DRF with additional functions. (A program might be able, for instance, to turn a rating directly into a success margin by running the rating through the DRF and then using a random number generator to produce a result in accordance with the rules stated below, speeding play still further.) To use a computational aid, program in the DRF as follows:

$$v = 0.31831 \tan^{-1}(0.031831r) + 0.5$$

where v = percentile result and r = rating.

Do note that this calculation is given in radians!

Numbers and Units in AR

Throughout this manual, essentially two types of units are used: ratings and percentiles. Ratings range from $-\infty$ to ∞ , and are designated by the Greek letter ρ or by a rating suffix (see below) in situations where confusion with percentiles could result. Percentiles, unlike ratings, range from 0 to 1 by hundredths; these are generally expressed decimally (i.e., .5) or with a percent sign (50%). In general, most attributes are listed in ratings, though a few (known as multipliers) are expressed as percentiles. Ultimately the difference is really minimal, as any rating can be converted to a percentile, and vice versa, via the DRF.

Symbol	Prefix	Multiplier
k	kilo	x1000
h	hecta	x100
da	deka	x10
-	-	x1
d	deci	x0.1
c	centi	x0.01
m	mili	x0.001

Ratings are normally scaled to human terms (an idea which will be explained in full later). In some cases this is not appropriate. For this reason, ratings may be scaled metrically, as per the included table. A scaled rating will carry a suffix appropriate to its scale, i.e., 50da or -3c. Percentiles, obviously, are not subject to scale.

Levels of Complexity

Whence the DRF?

The DRF came out of our need for a function which would map a range of ratings from $-\infty$ to ∞ onto percentiles (0 to 1) such that the convergence to the extremes would be asymptotic (which, obviously, it would have to be for the above to be true). The obvious function to start with is the tangent, inverted for our fiendish ends: a quick derivation is as follows...

$$y = \tan(x) \text{ [Start with a simple tangent..]}$$

$$x = \tan^{-1}(y) \text{ [Invert the mapping.]}$$

$$x = \frac{1}{\pi} \tan^{-1}(y) \text{ [Scale range to } (-0.5..0.5)\text{.]}$$

$$x = \frac{1}{\pi} \tan^{-1}(y) + 0.5 \text{ [Translate range to } (0..1)\text{.]}$$

$$x = \frac{1}{\pi} \tan^{-1}\left(\frac{y}{10\pi}\right) + 0.5 \text{ [“Soften” the DRF’s slope.]}$$

$$\therefore v = \frac{1}{\pi} \tan^{-1}\left(\frac{r}{10\pi}\right) + 0.5 \text{ [Viola, the DRF.]}$$

The final step in the above “softens” the DRF’s slope in order to make it close to 1:1 near the origin. The final result, presented numerically, may look a bit different, but the idea is that contained in the above.

Unlike many game systems, *Alternate Realities* allows GM's to choose not only the campaign setting, but also the complexity of the campaign rules. *AR* accomplishes this by having a modular system of attributes and rules which can be used or not as needed, changing not only the particulars of the game world but, indeed, the mechanics of the system. While it is not necessary to understand the full range of possible options in order to play the game (as most reality guides will specify which set of rules are being used), many GM's and Reality Designers will want to study the full system in detail so as to learn how best to tailor it to fit their needs. In general, players and GM's should simply remember that levels of complexity can be chosen so as to provide rules when necessary, and to remove them when they become a hindrance. More on this will be detailed throughout the *Primary Reality Guide*.

Character Value

In many systems, characters possess an index of "value" or "experience" which expresses in some sense the overall ability of the character and which provides a means of character improvement or advancement. Like these other systems, *Alternate Realities* has a notion of *character value* (expressed as *character value points*, or CVPs) which, in a rough kind of way, describes character capabilities. Unlike these other systems, however, character value in *AR* is not related to advancement, and is only a tool for campaign management.

Many GM's like to have a sense of overall party capabilities, so as to ensure that the challenges the characters will face will be matched with their potential performance. Likewise, most play groups (in the authors' experience) find role-playing more enjoyable when all characters are roughly equal in power. To facilitate this, many GM's may specify that all characters at the start of a campaign possess CVPs within a certain range...more details on how to accomplish this are given in the section on the character.

Material Components of Play

In order to play *AR*, one needs to have a few basic items. First and foremost, one needs access to the DRF in some form, be it a table, graph, or program. Also required is a system for generating random percentiles...most of the time this means two d10's, but enterprising players may use a computational device to merge this requirement with the previous one! Finally, most players will want to have a simple calculator for adding modifiers and multiplying percentiles. (A pencil and some paper will work for this purpose as well, for those who want to use their heads. :-).)

When playing a home-made adventure, these are all that is needed, but players may wish to take advantage of *AR* supplements such as *Reality Guides*. In these cases, obviously, the supplemental materials will be required. Additional paraphernalia such as character sheets, target webs, extra paper, and props are, of course, useful as well, and are left to the imagination of the player.

Critical Mechanics

Alternate Realities has at its core a few, simple rules which are used throughout the game for a variety of purposes. Indeed, it might be said that there is really only one basic mechanical principle (the *AR* equivalent of the Laws of Motion, if you will) lying beneath all of *AR*, a principle which is used in many ways. That principle is the *test*.

The Standard Test

When a character fires a gun, picks a lock, or attempts to smooth talk a potential gull, a test may be in order. The standard test converts a rating into an outcome, and is useful for any uncontested, singular action. To perform a standard test, first take the rating of the attribute being tested and add to it any relevant modifiers. These modifiers may be positive or negative numbers, and will depend on the difficulty of the task in question, the environment in which the test is being made, etc. Take the result of this addition, and plug it into the DRF; this will yield a percentile, called the *rolling target*. Roll percentile dice (or otherwise produce a random percentile), and subtract this from the rolling target to find your *success margin*. The success margin indicates how close to the best possible outcome (a margin of 100%) the person or thing making the test came.

This information is often sufficient in and of itself for the GM to determine a test's outcome. In some cases, however, another number, known as the *optimal result*, must be employed by multiplying it by the success margin. This number can now be used to resolve the test, as per the specifications for the object making the test.

The Continuous Form Test

While the standard test does a wonderful job of describing outcomes, the *continuous form test* is needed when those outcomes are really the result of a large number of tests being made continuously over time. Consider, for example, the process of healing. Healing occurs over a period of time, and, in fact, one might ideally determine the effects of healing by continuously performing standard tests, allowing the results to accumulate as

Continuous Form Rationale

If the continuous form test is supposed to be the summation of an infinite number of tests occurring over time, why can't we simply use an integral or recurrence relation to find the exact test analytically? Well, we can try, but there are some problems. For starters, we'll have to work from expected values since the test outcomes are probabilistic...assuming this for a normal test we get

$$E(S) = \frac{1}{100} \int_0^{99} (\rho - x) dx$$

$$= \frac{99}{100} \left(\rho - \frac{99}{2} \right)$$

$$\approx \rho - 0.5$$

(given ρ as the initial rating and S as the success margin).

In a situation in which the result of any particular test does not affect future tests (such as healing damage), we are now in a position to set up the expected value of the summation of the tests using the expected value of the particular tests (Jensen's inequality doesn't hold, because integration is a linear operator).

$$E(\rho_t) = \int_0^t (\rho - 0.5)\sigma(dt)$$

$$= (\rho - 0.5)\sigma(t)$$

This is, of course, just the result you'd get with a standard form test with backloading. So why do we have frontloading as well? To understand this, we must remember that some tests (such as stress/fatigue dissipation) actually affect the rating used by the test itself. This poses some particular problems, which are probably best seen by going through a similar derivation to the above.

(Continued...)

they do in nature. Unfortunately, in a game situation it is impractical (not to mention boring) to have players and GM's make thousands of die rolls and keep track of the results. So what do we do? We employ the continuous form test.

The continuous form test is, actually, almost completely similar to a standard test. Only two differences must be considered: a special modifier of +1 per minute of time being covered by the test is added to the rating before the application of the DRF; and secondly the optimal result number is given on a per unit time basis, and must be multiplied by the duration of the test. Otherwise, the test is performed as per a standard test, with a *test duration* set either by circumstances (one sleeps for an hour, hence the test duration is 60 minutes) or by the instigator of the test (a GM may decide that a poison must make an attacking test every five minutes).

Contests

In some cases, tests will face direct resistance from some source or another. In the event of such an instance, the relevant resisting attribute(s) are applied as negative modifiers (that is, they are modifiers equal to -1 times the attribute rating) to the test rating before applying the DRF. This rule is applied whether the test in question is a standard or continuous form test.

Continuous Form Rationale, continued...

From the above, we can build a recurrence relation for the expected value of a rating at t given the rating at t-1, the DRF, and the optimal result number for the time unit in question like so:

$$E(\rho_t) = (\alpha \tan^{-1}(\beta\rho_{t-1}) + \gamma - 0.5)\sigma + \rho_{t-1}$$

(where σ represents the optimal result for one time unit).

This in and of itself would be fine *if* we could solve it, getting an expression for ρ in terms of the initial condition, t, and σ . Alas, this does not appear (to the authors at the time of this writing) to be possible due to the extreme nonlinearity of the arctangent. We can also try to create a differential equation in the standard fashion:

$$\rho_t - \rho_{t-1} = (\alpha \tan^{-1}(\beta\rho_{t-1}) + \gamma - 0.5)\sigma$$

$$d\rho = (\alpha \tan^{-1}(\beta\rho) + \gamma - 0.5)\sigma(dt)$$

$$\frac{d\rho}{dt} = (\alpha \tan^{-1}(\beta\rho) + \gamma - 0.5)\sigma, \rho_{t=0} = \rho_0$$

which doesn't help us much, since this cannot be solved either.

So, barring a mathematical innovation, what are we to do? Well, we've elected to take a rough approximation of the optimal by considering the base time unit to be one minute, by "front loading" the DRF with a modifier of +1 per minute, and by "backloading" the optimal result. This solution is reasonable insofar as it creates a situation in which the longer you spend on the test, the more likely the test is to conform to its nominal result (which might be expected via the central limit theorem) and in which the result is based on the amount of tie involved (five minutes of sleep is very different from five hours of sleep). It's also nice game-theoretically, as it makes it optimal for players (and GM's) to roll only once for a large time block rather than split the block up into multiple rolls, even if (especially if) the players are risk averse. Hence, the rule "works" in a game sense and in a realism sense in addition to being easy to use and not requiring a brand new equation for players to deal with. Functional...but not very elegant. We're not proud of that.

The Character

The most important type of object in *Alternate Realities* is the character; it is through characters that the players (and, for that matter, the GM) are able to exert their will upon the shared reality of the game world. Players are encouraged to spend as much time as possible in designing their characters, and GM's are advised to aid players in this effort to their best of their abilities; good characters are the foundation upon which a successful campaign is built.

A Word About Ratings

Most character attributes are given as ratings, and hence range from $-\infty$ to ∞ . The middle value of 0 represents, in almost all cases, the "average" rating of an "average" person in the Primary Reality. Furthermore, unless stated otherwise all attributes are given to human scale and need no special adjustments.

Perceptive players will note at this point that the law of diminishing returns implies that a very high or very low rating does not translate into a very significant performance differential versus a moderately high or low rating. This is true, but hides an important point: the effect of very high or low attributes is not to change performance under optimal conditions, but instead to decrease the sensitivity of performance to environmental influences.

This is really quite intuitive, upon reflection. Consider, for instance, the task of driving a car. While a person of moderate skill is likely to perform day-to-day automotive tasks far more adroitly than one of little skill, it is unreasonable to expect that a driving ace would really make it to the corner store and back with significantly greater aplomb than would the moderately skilled driver. Frankly, one can only perform ordinary driving tasks so well, and it doesn't take much skill to be able to produce near-perfect results.

Why become a driving ace at all, then? Because, of course, not all tasks are created equal! While an intermediate driver can drive to the mall without breaking a sweat on a *good* day, can he do it as well during a blizzard, while being fired upon, or with a car full of screaming business majors? Probably not. What separates an expert from an amateur is the ability to perform well under a wide variety of circumstances, a separation captured in *AR* by the interaction of attributes and modifiers with the DRF.

Character Attributes

Characters in *Alternate Realities* may have a wide variety of attributes, depending on campaign complexity and the details of the particular reality being used. As they represent the interface between the character object and the game world, attributes are used in tests of various kinds and in some cases may interact with special features of other objects in the environment. All character attributes can be grouped into five basic categories:

Mental

Mental attributes concern the character's cognitive functions, including memory, processing, problem solving, and the like. Personality and perception are notably *not* included under the mental category, as they have separate categories all their own.

Physical

Physical attributes describe aspects of the character's body and the ability of the character to interact directly with the physical world.

Psycho-Social

Psycho-social attributes describe the personality of the character as well as the relationship between the character and the social world. Do note that issues of raw intelligence and the like are *not* included under this category, though self-concept and the ability to influence others are.

Sensory

The last of the four categories, sensory attributes articulate the ability of the character to perceive things in the character's immediate environment. Dealing with these perceptions, of course, is another matter entirely...

Furthermore, all attributes can be organized by level of complexity, of which there are five divisions:

Level 0

Level 0 attributes are the most basic in AR, and are used in all campaigns. (Usually.)

Level 1

Level 1 attributes describe aspects of the character in more detail than do level 0 attributes, and most campaigns will likely use level 1 attributes in at least one of the four categories.

Level 2

These attributes add yet more detail, and are suitable whenever a campaign features a great deal of action surrounding a particular attribute category. While many campaigns will use one, perhaps even two sets of these attributes (and still others may pick particular members of the level 2 group to use), it is not anticipated that all level 2 attributes will ever be used at once...though detail-minded GM's and players are welcome to try them out!

Supplemental (Level ∞-1)

Supplemental attributes provide extra detail as needed to "customize" characters and/or to deal with special features of the game world. Almost all campaigns will use some of these, but there is no "complete set", hence the informal label of these as "∞-1" attributes.

Skills (Level ∞)

The final level of attributes, with the finest level of detail, are known as skills, or "∞" attributes due to their uncountable quality. Like the supplemental attributes, these may vary wildly from reality to reality, and tend to govern very narrow aspects of the interaction between the character and the environment.

What follows is a list of all of the standard AR attributes, through Level 2. As has been noted, skills and supplemental attributes vary, and additional information concerning these may be found elsewhere in the *Primary Reality Guide*.

Level 0

Mental

Intelligence (INT)

Intelligence is an overall measure of the generalized cognitive capacity of the character (IQ may be thought of as INT+100). INT tests are appropriate whenever a character's mental acuity is in question.

Physical

Body (BOD)

Body presents an index of a character's physical capability, toughness, strength, and the like. A BOD test may be called for when a character attempts to take a physical action, or when something affects the character's physical body, so long as no more specific attribute is available.

Psycho-Social

Willpower (WIL)

Willpower is a generic measure of the strength of the character's personality, sense of self, and inner fortitude. WIL may be tested if a character is attempting to resist outside influences, or when the wishes of the player do not match the character's inner motivations.

Sensory

Perception (PRC)

Perception describes the character's overall perceptiveness as well as the physical acuity of his sensory organs. Tests of PRC may be made to determine whether a character is able to notice something unusual, perceive subtle differences between inputs, or perform other feats of awareness.

Level 1

Mental

Memory (MEM)

Memory, we seem to recall, describes a character's ability to remember and to recall learned facts. Any questions of memory should be resolved with a MEM test.

Verbal (VRB)

The verbal attribute is an indicator of a character's aptitude with language structures. Learning new languages, picking up jargon, and determining the meanings of obscure AR terms are all occasions which call for a VRB test.

Quantitative (QNT)

Quantitative reasoning concerns the character's capacity to reason with numbers, logic, and the like. Any mathematical, calculative, or logical tasks might demand a QNT test.

Spatial (SPL)

The spatial reasoning attribute is an index of the character's ability to mentally manipulate shapes and spaces, and to do topological and volumetric estimation. Tasks such as determining whether the contents of one bowl will fill another, finding isomorphisms between shapes, and figuring out whether a crevasse is too broad to jump all fall within the purview of SPL.

Physical

Dexterity (DEX)

Dexterity measures fine motor control, and is relevant to manipulative or delicate tasks. A DEX test might be required to disassemble a delicate device without damaging it, or to grab a thrown rope.

Strength (STR)

Overall muscular capacity is measured by strength; tasks such as bending or breaking items, doing pull-ups, and lifting heavy objects may require STR tests.

Agility (AGI)

Gross motor control is the province of agility. AGI tests may be required to keep one's balance in difficult situations, to dodge an attack, or to perform other similar feats.

Endurance (END)

Endurance is an overall index of physical toughness, resistance to disease and damage, and capacity to perform over time. Fighting off an infection, continuing to perform heavy activity when tired, and the like are all opportunities for END tests.

Psycho-Social

Presence (PRS)

Some persons seem to stand out in a crowd; whether loved or hated, they are never ignored. Presence is a measure of how “notable” a character seems to others (positive values indicate greater noticability, negative values signify levels of social “invisibility”). Any time that a character attempts either to gain or to avoid undue attention, a PRS test must be made; it should be noted, however, that PRS refers to the *social* response to a character, not to a character’s physical visibility, audibility, etc.

Normative Behavior and the Superego

“Norms” order actions, events, and the like onto a scale from “right” to “wrong,” “good” to “evil,” etc. Despite the fact that there isn’t (nor can there be) any absolute or universal normative system, most persons and cultures seem to make norms an important part of their personal and social lives. As the “conscience” of the character, the superego (SEG) represents the strength of the character’s normative beliefs within his or her personality; do note, however, that these beliefs do not have to coincide (per se) with those of other characters, the cultural defaults, or any other “normal” standard! It is possible to have a character with a very high SEG who passionately believes that advancing his or her material interests (for example) is “right”; such a character would look upon material sacrifice (theirs, anyway) with genuine disdain, and would properly feel guilty if they failed to get the best possible deal in any bargaining situation. Such a normative system might well conflict with the beliefs of others in the character’s community, possibly resulting in negative sanctions against the character, but this would not alter his or her conviction as to the essential “goodness” of his or her actions.

On a related note, it might be pointed out that the logical impossibility of “universal” ethics or morality does *not* mean that most persons or cultures have to be open-minded about the beliefs of others; more often than not, each actor thinks of his or her own normative system as being the “one, true way,” and many are repelled by the notion that others might disagree (or, worse, that another might see their *own* system as The Truth)!

Id (ID)

The id represents the drives, motives, and instinctual needs of the character. The particular needs involved are either specified by the player in the character’s background (or in supplemental attributes), or else default to those which are standard for the character’s culture. The ID attribute measures the strength of the character’s drives, and as such is tested whenever a character attempts to resist his basic motivations. ID should play an important role in the way a character is played: characters with low ID scores should be unmotivated, with little energy or ambition, while characters with high IDs are likely to be impulsive, vulnerable to addiction, and the like.

Ego (EGO)

The ego constitutes the internal “negotiator” which attempts to reconcile the demands of the id and the prerogatives of the superego with the external environment. In addition to forming the basis for a character’s psychological resiliency and strength of self, the ego can be used to resist internal demands (allowing an ID or SEG test to become a contest vs. EGO) in such cases as rational (or rationalized) reasons can be found for doing so. Like other psychological variables, EGO should be role played:

characters with high EGO scores are more likely to be “cooler” under fire, to resist internal and external pressures, and to have a strong sense of self; characters with low EGO ratings, on the other hand, may bounce back and forth between id and superego demands, may suffer from constant neurosis (stress built up from using effort to resist internal conflict), and may lack “groundedness” or a sense of self.

Superego (SEG)

In Freud’s terms, the superego is “the voice of the father,” a normative personality component which directs (or restricts) behavior in an effort to follow certain principles or idealized roles. Like ID, the SEG attribute represents the overall strength of this normative force, whose particular nature is either specified in the character’s background (or supplemental attributes), or else which defaults to those strictures/prerogatives appropriate to the character’s culture. Whenever a character attempts to violate/resist the demands of the superego, a SEG test is called for; obviously, this test will, often, wind up being a contest between the SEG and ID (and/or EGO) or vice versa, depending on which personality components are “encouraging” and which are “resisting” the action in question. Like the ID and EGO attributes, SEG should be played out: characters with high SEGs will try very hard to follow what they believe to be “right” behavior, while those with low SEG scores may have no normative sense at all!

Sensory

Sight (SIT)

The sight attribute describes, in a nutshell, the ability of a character to perceive things visually. Noting subtle differences in color, making observations at a distance, and other such tasks might call for a SIT test.

Hearing (HER)

Hearing defines the character’s auditory sensitivity and perception. Listening at doors, hearing far-off pursuers, and appreciating the difference between B and B₂ are all appropriate occasions for HER tests.

Smell (SML)

The smell attribute provides an index of the character’s olfactory sensitivity. Noticing the faint smell of gas in a room or attempting to judge the quality of tea leaves by their aroma might call for a SML test.

Taste (TST)

Not an indicator of cultural refinement inasmuch as a description of sensory capacity, taste measures the character’s gastronomic acuity. A TST test might be called for when a character is attempting to detect poison or impurities in food, trying to compare the merits of a well-heeled burgundy with fruity rosé, or simply to avoid noticing how bad the party’s rations are. (In the latter case, obviously, a high TST score might be less than desirable.)

Touch (TCH)

Sensitivity of the sense of touch is indicated by the TCH attribute. A TCH test might be employed when a character seeks to find a concealed door, or any time when it is necessary for the character to notice subtle differences in texture.

Level 2

Mental**Mnemonic Capacity (MCP)**

Mnemonic capacity expresses the character's overall capacity to remember things. A high MCP score indicates the ability to store vast amounts of information regarding any subject, while a low MCP score indicates that only scattered storage is possible. MCP tests may be needed when learning new things, when making observations, or when seeking to recall obscurities.

Mnemonic Retention (MRT)

The mnemonic retention attribute provides an index of the overall permanence of a character's memory. Characters with high mnemonic retention scores will remember facts for a long time before forgetting them; by contrast, those with exceptionally low MRTs may have difficulty recalling events of the past few hours! MRT tests are commonly made to see whether skills will degrade over time, and may be used to determine whether a character recalls some specific fact (note that an MCP test may first be required to see whether the fact was ever stored!).

Verbal Performance (VPF)

Verbal performance indicates the capacity of the character to solve difficult verbal problems. VPF tests may be made alone when time is not of the essence, or may be made in conjunction with VSP tests when difficult problems must be solved quickly.

Verbal Speed (VSP)

Verbal speed is an attribute measuring the rapidity of a character's verbal cognition. When it is necessary to determine whether or not a character is able to make a quick response or to solve some other time-dependent verbal problem, a VSP test is in order; a VPF test may be required as well if the problem is of non-trivial difficulty.

Quantitative Performance (QPF)

Quantitative performance indicates the capacity of the character to solve difficult mathematical or logical problems. QPF tests may be made alone when time is not of the essence, or may be made in conjunction with QSP tests when difficult problems must be solved quickly.

Quantitative Speed (QSP)

Quantitative speed is an attribute measuring the rapidity of a character's mathematical or logical reasoning. When it is necessary to determine whether or not a character is able to make a quick calculation or to solve some other time-dependent quantitative problem, a QSP test is in order; a QPF test may be required as well if the problem is of non-trivial difficulty.

Spatial Performance (SPF)

Spatial performance indexes the ability of the character to solve difficult problems of spatial reasoning. SPF tests may be made alone when time is not of the essence, or may be made in conjunction with SSP tests when difficult problems must be solved quickly.

Spatial Speed (SSP)

Spatial speed is an attribute measuring the rapidity of a character's spatial cognition. When it is necessary to determine whether or not a character is able to make a quick determination or to solve some other time-dependent spatial problem, a SSP test is in order; a SPF test may be required as well if the problem is of non-trivial difficulty.

Physical**Size (SIZ)**

Size is what it appears to be: an attribute describing the physical size of the character relative to the human norm. SIZ itself measures body mass $((65+SIZ)kg)$, but is defaulted to correlate with height as well; a height supplemental attribute may be used if players find this to be unsatisfactory.

Handedness (HND)

Somewhat counterintuitive at first blush, handedness measures the extent to which a character is able to perform tasks learned with one side of the body with its counterpart. When in such a situation, the skill in question has its rating reduced to $rating*DRF(HND)$...hence, a person with a very high HND is effectively ambidextrous, while an individual with a very low HND can perform skills only with the side of the body with which they were learned.

Speed (SPD)

Speed is, as the name implies, the physical capacity of a character to move and run quickly. *Note: SPD is a macro, and is equal to $(DRF(END)+DRF(AGI))*(25/3)$ meters per round.* Running this distance has a base cost of 50 action counts; fractional distances are, of course, permissible.

Hit Capacity (HIT)

Hit capacity determines the structural integrity of the character's body; the amount of damage the character can take before being scrapped. *Note: HIT is a macro, and is equal to $DRF((SIZ+END)/2)*10000$.* The average hit count, then, is equal to 5000. Because HIT is a macro, it will change along with the attributes which comprise it; be sure to keep this in mind when training attributes.

Stamina (STA)

Stamina reflects the stability and durability of the character's body as a system. STA is used in resisting fatigue, disease, and poison, among other things.

Psycho-Social**Pulchritude (PUL)**

Pulchritude is nominally a measure of attractiveness; in AR, however, pulchritude indicates the striking qualities of a character's physical presentation. A character with a high pulchritude is extremely notable in appearance; whether this notability is considered beautiful or hideous will depend on the cultural aesthetics of the observational context. A PUL test may be called for if a character is attempting to garner, or to escape, attention in a situation in which his or her countenance is visible.

Command (COM)

COM provides an index of the tendency of a character's speech and behavioral mannerisms to command attention from others. COM tests can indicate whether a character is able to become the focus of a crowd, or to remain anonymous when passing a police checkpoint. Note, however, that (unlike pulchritude) command requires close observation of the character and/or the ability to hear the character speak.

Identity (IDT)

Identity is a generalized measure of a character's "groundedness," sense of self, and environmental certitude. A character with a high IDT score is likely to be resistant to attempts at brainwashing, able to withstand conceptual shocks unfazed, and capable of existing in highly ambiguous situations without losing his or her sense of purpose; on the other hand, such a character may also be dogmatic,

stubborn, and unwilling to adapt to new realities. A low identity indicates a more malleable personality: characters with extremely low IDTs may exhibit borderline personality disorder, or may be schizotypal! As with the high range, the low range of identity has its upsides: characters with low IDTs are likely to be very adaptable and willing to change...whether it's in their best interests or not! IDT tests may be called for when a character faces revelations which call his or her conception of reality, or of self, into question, when subjected to extremely alienating events (serving time in prison, attending the republican national convention), or when facing attempts at manipulation.

Vim (VIM)

Empathy Vs. Sympathy

Some players and GMs may find the distinction between empathy and sympathy confusing at first; in particular, quarrels may ensue over which attribute should be tested in a given situation. Happily, there's an easy solution to this: test both attributes!

For example, consider the case of George of the North, who is facing a sales pitch from Fredricka the Refrigerator Seller. Fredricka tells George that a new refrigerator is his tribe's only hope for survival; George (and his player) is skeptical.

At this point, George's player asks the GM whether George should believe Fredricka's pitch. The GM points out that this isn't for him to decide, but makes a few rolls to see what George perceives. George makes his empathy test with a high success margin, but flubs sympathy slightly, so the GM decides to tell George's player that George feels like Fredricka is the sort who *would* lie to him, but that she *seems* to be sincere (in reality, the GM knows that Fredricka is full of it). Given this information, George's player may either make a decision or else seek to employ some other means (such as testing the reasoning of Fredricka's arguments) of determining whether George believes her.

Often, as in this example, sympathy and empathy may give conflicting answers to the same questions. This is fine, and, moreover, a pretty good simulation of what happens in real life! What the character believes, in the end, depends on how the player weighs the information fed to him or her by these different psycho-social "senses".

Just as stamina measures the ability of the body system to deal with shocks, VIM provides an index of the resiliency of a character's psycho-mental system. Withstanding pain and other sources of stress is a common use of VIM; it is a critical attribute whenever a character must face significant mental or psychological demands.

Empathy (EMP)

Empathy represents the character's ability to intuitively put themselves in someone else's shoes, to *know* the internal state of another given some knowledge of his or her situation and history. Empathy is *not* identical to sympathy: empathy is based on subconscious simulation, whereas sympathy makes use of subtle observational cues. Neither is empathy a skill per se (although one might be able to learn a skill which duplicated some of empathy's effects), rather it represents a fundamental capability of the character's personality to intuitively understand Others. EMP tests may be used by characters to predict the behavior of others, to ascertain the probability of being lied to by a particular person, etc.

Sympathy (SMP)

Unlike empathy, sympathy represents the character's ability to intuitively infer the internal state of another based on subtle facial, vocal, and behavioral cues. This ability is *not*

a skill (though the capabilities some characters exercise through sympathy might be learned by others through a skill) but is, rather, an ability inherent to the

character. SMP tests can be employed for a variety of purposes; examples include detecting deception, inferring anger or fear, and the like.

Sensory

Sight: Organic (SIO)

The SIO attribute reflects the acuity of the “hardware” of the character’s optical system. Any enhancements or damage to a character’s eyes will affect his or her SIO rating.

Sight: Neural (SIN)

Unlike sight: organic, sight:neural expresses the ability of the character’s brain to interpret visual data. Even if a character’s eyes are removed, his or her SIN will remain unaltered. On the other hand, damage to the part of the brain which controls visual perception will definitely lower a character’s SIN.

Hearing: Organic (HEO)

The HEO attribute reflects the acuity of the “hardware” of the character’s aural system. Any enhancements or damage to a character’s ears (inner or, for that matter, outer) will affect his or her HEO rating.

Hearing: Neural (HEN)

Unlike hearing: organic, hearing:neural expresses the ability of the character’s brain to interpret aural data. Even if a character’s eardrums are removed, his or her HEN will remain unaltered. On the other hand, damage to the part of the brain which controls aural perception will definitely lower a character’s HEN.

Smell: Organic (SMO)

The SMO attribute reflects the acuity of the “hardware” of the character’s olfactory system. Any non-cosmetic enhancements or damage to a character’s nose will affect his or her SMO rating.

Smell: Neural (SMN)

Unlike smell: organic, smell:neural expresses the ability of the character’s brain to interpret olfactory data. Even if a character’s nasal passages are removed, his or her SMN will remain unaltered. On the other hand, damage to the part of the brain which controls olfactory perception will definitely lower a character’s SMN. (This could, of course, be a blessing in some cases...)

Taste: Organic (TSO)

The TSO attribute reflects the acuity of the “hardware” which supports a character’s sense of taste. Any non-cosmetic enhancements or damage to a character’s tongue will affect his or her TSO rating.

Taste: Neural (TSN)

Unlike taste: organic, taste:neural expresses the ability of the character’s brain to interpret data regarding taste. Even if a character’s tongue is removed, his or her TSN will remain unaltered. On the other hand, damage to the part of the brain which controls the perception of taste will definitely lower a character’s TSN.

Touch: Organic (TCO)

The TCO attribute reflects the acuity of the “hardware” of the peripheral nervous system. Any significant, non-cosmetic enhancements or damage to a character’s skin will affect his or her TCO rating.

Touch: Neural (TCN)

Unlike touch: organic, touch:neural expresses the ability of the character’s brain to interpret data regarding touch. Even if a character’s skin is severely

damaged, his or her TCN will remain unaltered. On the other hand, damage to the part of the brain which controls perception of touch will definitely lower a character's TCN.

Supplemental

Note that an infinite number of supplemental attributes are possible; those described here are merely the most common. Like all attributes, supplementals may be positive or negative unless stated otherwise, and may thus represent talents or disabilities.

Mental

Direction Sense

This describes the character's ability to determine his or her location through dead reckoning. Direction sense is linked with SPL.

Language Talent

Language Talent represents an innate faculty for the learning of languages. Add Language Talent as a bonus when training any language skill. Language Talent is linked with VRB.

Mathematical Talent

Mathematical talent describes an unusual ability to master difficult mathematical concepts. Add Mathematical Talent as a bonus when training any skill which draws on mathematical abilities (see skill prerequisite). Mathematical Talent is linked to QNT.

Physical

Actions (ACT)

As the name implies, ACT is related to the number of actions a character can perform during a two-second round. *ACT is a macro, determined as follows:* Add INT, STR, DEX, and AGI, divide this by 4, and plug the result into the DRF. Multiply the output (between 0 and 1) by 2 and round *up* to the nearest 0.5; this number is your ACT rating. During fast action, the cost (in action counts) of taking a particular action is found by taking that action's base cost and dividing it by the character's ACT macro.

Age (AGE)

AGE gives the character's age in years. This number may have social significance, and is relevant to changes in character attributes due to the aging process. For obvious reasons, AGE is never negative.

Allergies (Vulnerabilities)/Tolerances

For each allergy a character possesses, the allergy rating describes the allergy's severity. The allergen should be considered a fatigue poison with an optimal attack result equal to the allergy rating (if the substance is already a poison, *add* the allergy rating to the poison's optimal attack result). The STR of the substance should vary depending on the quantity to which the individual is exposed. (Note: like most other attributes, this can be negative; a negative vulnerability implies an unusually high tolerance level!)

Damage Effect Multipliers (DEMs)

Damage effect multipliers (1 for each damage type) govern the character's body's tendency to be affected by damage. For the standard human body, all DEMs are 1.0; other creatures may vary. Sample DEMs can be found for parent objects in the *Generic Lists*, and full details on their use may be found in the section on *supplemental mechanics*.

Damage Transference Multipliers (DTMs)

Damage transference multipliers (1 for each damage type) govern the character's body's tendency to transfer (rather than to absorb) damage. For the standard human body, most DTMs are 0; other creatures and objects may vary. Sample DTMs can be found for parent objects (human flesh included) in the *Generic Lists*, and full details on their use may be found in the section on *supplemental mechanics*.

Disease Resistance/Disease Vulnerability

An individual's disease resistance score is subtracted from the optimal attack result of any disease which affects the character. (As usual, a negative disease resistance score implies a heightened vulnerability to disease.)

Fatigue

Fatigue is an index of the current amount of physical system trauma facing the character. Fatigue makes actions more difficult; full details on fatigue can be found in the section on *supplemental mechanics*.

Flexibility

A character may make a flexibility test in order to perform unusual contortions (within reason, of course). This may result in a bonus to attempts at the Escape skill, or other skills which demand flexibility; in such cases, make a Flexibility test with an ORN equal to the Flexibility rating, and add the result as a bonus (or penalty, if applicable) to the skill test.

Grace

Grace refers to the character's ability to maintain tight control over body position. Grace rolls may be used to give a bonus to tests of Dance (or other physical performance skills), with an ORN equal to the Grace rating. Grace is linked to AGI.

Half-Median Age (HMA)

The half-median age attribute is, nominally, one-half of the median life expectancy for the character (as defined by that character's culture). The HMA is fairly dependent upon access to long-term medical technology, nutrition, etc., and can vary from 20 to 25 in primitive cultures to 38 or more in, say, the primary reality's developed regions. A character's HMA governs his or her aging process; the higher the HMA, the more years of "uphill" development before the character's body begins to deteriorate.

Initiative (INI)

Initiative represents the ability of a character to act quickly and reliably under stress. INI is used in fast action to determine the number of action counts received each round, and may in some cases determine the order in which the character's actions resolve. In campaigns where INI is not specified separately, it is recommended that $(AGI+STR+DEX+INT)/4$ be used in its place.

Strength of Grip

This refers to a character's ability to hold onto an object (such as the edge of a cliff, or the hilt of a sword). Strength of Grip may substitute for STR in cases where only the hands and wrists are involved. Strength of Grip is linked to STR.

Psycho-Social

Addictions

A character who is addicted to a substance or behavior will engage in it whenever the opportunity arises (or, when such an opportunity can be created!). In order to resist the addiction, the character must make a contest between EGO

(+SEG if applicable) and ID+Addiction. If successful, the character may avoid the behavior...but may be subject to withdrawal symptoms, and will have to make a new roll if an opportunity to gain the object of the addiction surfaces again.

Affinities/Intolerances

An affinity or intolerance affects the way in which a character will perceive and act towards others. In order to avoid acting in a manner consistent with the affinity or intolerance, the character must make a contest between EGO (+SEG if applicable) and ID+Affinity. (A negative affinity, obviously, is an intolerance.) While it is possible for a character to be aware, in a general way of an affinity or intolerance, most characters will go to great lengths to rationalize their behaviors in accordance with the dictates of their SEGs....

Animal Empathy

Characters with nonzero Animal Empathy must add their ratings as bonuses (or penalties, if appropriate) to EMP or SYM tests made on non-humans. The GM may forego this if he or she considers the targets to be “too alien” for this attribute to be effective.

Charisma

A character must add Charisma to any test which attempts to influence others. As charisma can be negative, this is not always a desirable thing. Charisma is linked with PRS.

Compulsions/Aversions

A character with a compulsive behavior will engage in it whenever the opportunity arises (or, when such an opportunity can be created!). In order to resist the compulsion, the character must make a contest between EGO (+SEG if applicable) and ID+Compulsion. If successful, the character may avoid the behavior, but he or she will have to make a new roll if an opportunity to act out the compulsion strikes again. (Note that negative compulsions act as *aversions*!)

Delusions

A character who possesses one or more delusions will believe in them (and act on them) even though he or she may be aware that they are idiosyncratic (or worse). Whenever a character attempts to overcome or ignore the delusion, he or she must make a contest between EGO and IDT+Delusion. Even if this is successful, the character will reassert the delusion as soon as possible, and further tests must be made in order to continue to ignore the delusion.

Fanaticism (Code of Behavior)

A fanatical character is strongly dedicated to a particular set of principles. In order to act in a manner which does not reflect those principles, the character must make a contest between EGO (+ID, if applicable) and SEG+Fanaticism. If successful, the character may avoid the fanaticism for this action, but he or she will have to make new tests for further actions.

Reputation

A character's Reputation indicates a particular perception of him or her within some specified group. Those in the group add the character's Reputation as a bonus when attempting to recall facts about him or her (as specified by the nature of the reputation), and the character must add Reputation to his or her PRS tests when members of the affected group are present.

Status

Status indicates the degree of power a person holds, relative to others in his or her society. A person's real power is equal to (Median

Power)*EXP(Status/(Concentration of Power)). For more information, see the section on CDOs.

Stress

Stress indicates the current level of psychological and mental trauma facing the character. Stress makes actions more difficult; full details on fatigue can be found in the section on *supplemental mechanics*.

Temper/Restraint

When a character is angry, frustrated, or afraid, he or she must make a contest between ID+Temper and EGO (+SEG if applicable) or lash out violently against the nearest available target. A successful EGO test will, in such cases, allow the character to choose the object of the outburst, but the target must be immediately at hand in any case.

Wealth

A character’s Wealth rating indicates how his or her wealth compares to the Median Wealth for the character’s culture. Specifically, the character’s total value is equal to (Median Wealth)*EXP(Wealth*DRF(Concentration of Wealth)). See the section on CDOs for more details.

Sensory

None in version 1.0.

Skills

Skills are extremely specialized, changeable attributes; often, they represent specific training or knowledge used to perform a set of tasks. Like most other attributes, skills are listed in ratings whose values may stretch from $-\infty$ to ∞ , and have a “base value” of 0. Because of the differing ways in which skills are used in the “real world,” however, and because of the fact that each “skill” in *Alternate Realities* is really a “package” of other attributes, AR skills possess a criterion known as a *difficulty level*. The difficulty level of a skill provides a standard bonus or penalty to that skill whenever it is used, serving to adjust for the fact that the “normal” level of performance in, say, neurosurgery is different from the “normal” level of performance in a skill such as cooking. The difficulty levels for skills may be found in the table below.

Difficulty	Symbol	Bonus
Very Easy	VE	+10
Easy	E	0
Moderate	M	-10
Hard	H	-20
Very Hard	VH	-30

In addition to a difficulty level, each skill possesses a *prerequisite*. The prerequisite represents other skills and attributes which “feed into” any given skill. Prerequisites affect skill learning (see the section on character improvement), and are considered “default” skill levels for characters without specific skill training. A full list of skills, with difficulty levels and prerequisites, is provided in the

Generic Lists. As noted in the *Lists*, many skills have multiple prerequisites; in such cases, players may choose to use that which is most advantageous.

Character Creation

Character creation in AR is different from most other RPGs. From a rules perspective, the particular way in which the character’s initial attributes are determined is unimportant: what matters is that the character’s attributes accurately reflect the character as he or she is conceived of by the players and by the GM. With this in mind, *Alternate Realities* does not attempt to force a single system of character creation on players and GMs, but instead attempts to offer a variety of

character creation alternatives, each having its own unique properties. As with other aspects of AR, GMs are encouraged to use whatever method works best for the particular campaign in question.

Character Creation Basics (Common to All Methods)

AR has some basic elements of character creation which exist independently from the particular method of determining attributes:

Relevant Attributes

Alternate Realities specifies a very, very large number of attributes in the *Primary Reality Guide* alone; ultimately, an infinite number are possible. In many campaigns, however, a very small number (perhaps as small as five) of attributes are really relevant for most characters. When canvassing for characters, then, GMs should be careful to specify which attributes are being used (i.e., only Level 1; physical at Level 2, all others at Level 0; Level 0 except for the inclusion of VIM, STA, stress, and fatigue; etc.). Suggested levels of complexity can be found in most *Reality Guides*.

Order of Assignment

In general, it is recommended that Supplemental attributes be determined first, followed by Level 2, Level 1, Level 0, and Skills, in that order. This is because of the fact that some attributes in AR are linked. These links (indicated on the Attribute Distribution Chart) constitute “downward moving averages”: an attribute at a given level is the arithmetic mean of those attributes at the next highest level. PRS (presence), for instance, is equal to the average of PUL (pulchritude) and COM (command); WIL (will), in turn, is equal to the arithmetic average of PRS, ID, EGO, and SEG.

In many cases, obviously, many attributes will go unspecified. In such cases, players should begin at whatever location on the “chain” comes first.

Attribute Values

The default rating for standard attributes is 0. Recall that the default target percentile from a given attribute is equal to DRF(rating), and that this process can be reversed (getting a rating in terms of its percentile) either by using the inverse of the DRF, or by turning a DRF graph at right angles.

Mediated Character Creation

Mediated character creation is the most labor-intensive method of producing characters, but it is likewise one of the most rewarding. Characters produced by mediation tend to be rich, with well-defined histories and relationships, and are well-suited to campaigns involving intrigue, relationships between characters, or “internal” challenges within the character personas. The downside of mediation is that it requires extensive “pre-campaign” involvement with the GM (and, possibly, with other players), which can be difficult to arrange in some cases.

How it works

The player constructing the character meets with the GM and begins to narrate (in an abbreviated form!) the life history of the prospective character. This narration may follow an idea or script prepared earlier by the player, or it may be wholly spontaneous; the optimal balance between the two will obviously depend on the situation. As the player proceeds, the GM may interject with suggestions, changes (if an idea won't fit with the campaign), requirements (the GM may dictate that some particular advantage or opportunity require some limitation or sacrifice on the part of the character), or challenges. Challenges reflect pivotal events in the pre-campaign life of the character, and are role-played loosely (or not, if the GM wills) by the player and the GM to explore and refine elements of the character's history.

During the narrative process, the player and GM should note the events and agreements which ensue. When the narrative is completed (when the point of the campaign is reached), the GM will make use of these notes to translate the story of the character's life into AR terms with the help of the player. Attributes and skills which differ from the default values should be identified and set to levels which accurately depict the character which has emerged from the discourse between the player and the GM; additional historical and clarificatory notes may be added to the character sheet to ensure that important aspects of the character's history are not forgotten. When the player and the GM are satisfied that the character is completed, any final touches are made to the character sheet, and the character is now ready to be played.

Recommendations

The mediated system of character creation is highly recommended for most campaigns, as it results in a rich, interesting character and because it can be fun in and of itself. Endless variations on mediation are possible, including allowing multiple players to participate at once (giving them a shared history together) and letting the GM set the primary narrative (with the *player* having veto power!). The mediated system, as has been noted, is nearly a necessity for campaigns which require a great deal of intrigue, or which focus on internal conflicts. On the other hand, mediation can be a challenging process for those new to role-playing, and it is clearly inappropriate for one-shot or "spontaneous" campaigns, or for campaigns with a high mortality rate. For these types of campaigns, players and GMs may wish to consider some of the alternative methods offered here.

Character Value Point (CVP) Character Creation

The CVP system of character creation is similar in many ways to that used by many other role-playing systems; this alone may recommend it to some gaming groups. Advantages of using the character value system include the fact that it allows the character creation process to be more highly decentralized, and that CVPs may help to alleviate concerns among players vis a vis character inequality. The CVP system has its disadvantages, however: character value is an approximate measure, and overreliance on it may lead to disputes; orientation on building a character within a certain value range may distract players and GMs alike from thematic and "story" issues; and some players and GMs may find the accounting process itself to be tedious.

How it works

When the GM is canvassing for characters, the GM specifies that the characters are to be designed using the CVP system, and that all characters must fall within some range on this scale. Players then design their characters, setting attributes at the appropriate levels; as usual, it is recommended that the characters start by assigning Supplemental attributes, then work "backwards" to the Level 0 attributes (adding skills and computing macros after this is completed). The character's value in CVPs is generally considered to be equal to the sum of the values of all character attributes (recalling that unspecified attributes are automatically zero); in some cases, however, the GM may exempt certain attributes (or sets thereof) from computation, or may even declare their values to be inverted (that is, the attribute is *subtracted* rather than *added* to the CVP total). This last might occur in a specialized campaign in which certain attributes might be disadvantageous: for example, a cloak and dagger campaign might take presence, pulchritude, and command to be inverted attributes because they make characters more noticeable.

It may be, at this point, objected that this process is subject to a fair amount of interpretation (perhaps even abuse). This is true, but perhaps no more so than with other systems. In the end, whether an attribute makes a character more or less "valuable" depends wholly on the circumstances. While it is possible to structure the game system in

such a way that attributes tend to reflect (more often than not) a general index of the ability of the character to influence the game environment (taking this as a fairly general idea of “value”), *AR* is designed more for playability, modularity, and realism than for accounting. Players and GMs who use the CVP system, then, are advised to take the CVP total as a *guideline* for the overall efficacy of the character, and should (in most cases) rely as much on thematic considerations as on point totals when designing characters.

Recommendations

While some effort is involved in making sure that a character designed with the CVP system fits the acceptable value range, this is, all in all, a faster way of doing things than mediation. The character value approach is particularly nice in that it allows players to create characters without GM supervision: the GM can always come into the process at the end, to “touch up” characters and to ensure that they are appropriate. This can make the CVP system a good choice for gaming groups which meet only occasionally, and/or those whose members are widely dispersed. Groups who are concerned with keeping characters on an even footing will appreciate the utility of CVPs, as will novice GMs, who may need help in keeping anti-character threats in line with character capabilities. For those who are able to spare the time, however, we recommend that some mediation be used in conjunction with the CVP system; this will serve to enrich and clarify the characters

whose skeletons have been established with CVP.

Random Ideas

Instead of rolling normal percentile dice (which are uniformly distributed), some groups may prefer to use other combinations (such as 5d20, 10d10, 25d4, etc.) when determining percentiles for character creation. In general, the more dice which are used (additively) to find the total value, the less the distribution looks uniform, and the more it tends to approximate the Gaussian (or normal) distribution. This latter distribution may be preferred by those who are risk-averse, or by GMs who wish to constrain the variance in attribute values, while those who live closer to the wild side may appreciate the former. The final say-so, of course, lies with the consensus of the gaming group.

Randomized Character Creation

Used in some of the oldest existing RPGs, the notion of characters created through a random process is important and popular enough to warrant an application to *Alternate Realities*. While characters created randomly tend to be, well, *random*, talented players can turn even the most lopsided of attribute sets into a well-conceived, fun to play character. Random creation is the fastest of the modes presented: even characters specified at Level 2 can be made in minutes with a little practice. Likewise, little knowledge of the *AR* system is needed to build a random character. Randomizing allows novice players and GMs to get on with the business of playing, letting the characters come clear through the gaming experience.

How it works

For each of the relevant attributes (starting with the Supplemental attributes and “working backwards” to Level 0), the player rolls percentile dice. The resulting number is plugged into the inverse DRF to find the appropriate rating, which is indicated on the character sheet. After this process is completed, final touches (including any macros) are added “by hand”, and a character history is constructed which is consistent with the attribute set.

Recommendations

Many players have strong feelings (pro or con) vis a vis randomized characters. Whether or not randomization is appropriate depends on the gaming group and on the campaign goals; in particular, “one-shot,” humorous, or first-time campaigns may be much better served by randomized characters than others. It is not generally recommended that GMs use randomized character generation for campaigns which depend critically on

“deep” characters with well-defined histories, though some players of great expertise may appreciate the challenge of building complex characters from random “skeletons.”

Character Development

Unlike many other role-playing games, *Alternate Realities* provides no abstract system for character development. *AR* characters improve their skills and attributes the same way that real

Advancement Tests

Because character advancement occurs over time, it would seem that tests which alter attributes should be *continuous form tests*. Indeed, in a way they are: they still use an optimal result number based on the amount of time in question. However, the “front end loading” of the continuous form test is unsuitable here, and as such we use standard form tests. If this is troubling, think of advancement tests as being continuous form tests with a penalty equal to the number of minutes covered by the test. That’s how we rationalize it....

people do: through training and practice. Likewise, character development is not synonymous with character “advancement”: *AR* characters will gradually forget skills which they do not use, and grow “soft” if they do not make an effort to keep their attributes honed.

Changes in attributes can occur through training, decay, and aging (as well as, in some cases, surgical modification, extreme bodily dysfunction, etc.). These changes are considered to be cumulative, and are applied separately. Hence, a player may lose STR due to aging, but gain STR due to exercise over the same time period.

Increasing Attributes

Attributes are increased through a process of training. Whenever a character uses a skill or attribute intensely for some period of time, that attribute may

increase. While the basic mechanism for changing attributes is the same for skills as for other properties, we will here consider these cases separately; this is done in order to clarify the process for players and GMs.

How Attribute Increases Work

Improvement of attributes takes place through a standard form contest between the prerequisite of the attribute and its current rating. To determine the prerequisite of an attribute, locate the attribute’s position on the attribute distribution chart. Find the attribute(s) *above* (lower in level) that in question which is(are) connected to it via a dependency link(s); average these (if more than one) to find the prerequisite. (If there are no dependencies upon which to draw (as with the Level 0 attributes), the prerequisite has a rating of 0.) Once the prerequisite has been established, subtract from it the character’s current attribute rating and plug the result into the DRF; this will yield a rolling target, and, once the roll is made, a success margin.

Once the success margin is found, check to see whether it is above 0. If not, no increase takes place and the character is right back where he or she began. Otherwise, the current attribute rating is increased by the product of the success margin, the amount of time covered by the test, and the optimal result number. To find the appropriate optimal result number, consider the table below; the ORN depends on the attribute being trained, and on the type of training which is being applied.

Non-Rating Attributes and Advancement

The character advancement system considered here is designed for attributes which are given in terms of *ratings*. Generally, non-rating attributes are not subject to training and, hence, to change through the development process. If new attributes are defined which are both trainable and which are not given in ratings, the descriptions of these attributes will explain how they may be altered.

<i>Attribute</i>	<i>Use (L)/Week</i>	<i>Use (M)/Week</i>	<i>Use (H)/Week</i>	<i>Practice/Hour</i>	<i>Group/Hour</i>	<i>Teacher/Hour</i>	<i>Decay/Week</i>
Level 0	--	0.0512	0.256	0.0256	0.0384	0.0512	0.0512
Level 1	--	0.064	0.32	0.032	0.048	0.064	0.064
Level 2	--	0.08	0.4	0.04	0.06	0.08	0.08
Supplemental	--	0.1	0.5	0.05	0.075	0.1	0.1
Skill	1	2.5	5	0.5	0.75	1.5	2.5

(Some notes regarding the attribute advancement table: Some attributes are considered *untrainable*, and are not subject to increase through normal means (obviously, these attributes do not decay, either). Untrainable attributes include all non-rating attributes (such as the DTMs and DEMs), as well as SIO, HEO, SMO, TSO, TCO, PUL, and any macros. In the above, “light” use constitutes less than 5 separate occasions per week, “moderate” use indicates 5 to 10 uses per week, and “heavy” use indicates greater than 10 separate uses per week. *Practice* consists of uninterrupted, concentrated, individual effort at training. *Group* training is identical to practice, save in that the character is training alongside others whose attribute levels are the same or lower; group training in which one or more of the group members possess a higher level of the attribute in question gets the *Teacher* ORN instead.)

Increasing Skills

As has been mentioned previously, skills *are* attributes; however, because skills are much narrower in scope and more subject to change than attributes, it makes sense to consider them separately.

How Skill Increases Work

After a period of intense skill usage, that skill may increase. To find out, it is necessary to make a standard form contest between the skill’s *prerequisite* and the character’s current skill rating. To find the prerequisite, consult the description of the skill; generally, this number is a weighted average of several other attributes. In order to perform the test, take this prerequisite and subtract from it the character’s current skill rating; plug this into the DRF, and then roll to determine the success margin.

If the success margin turns out to be 0 or less, the attribute remains unchanged (in game terms, the character failed to learn anything new from his or her experience). Otherwise, learning has occurred: the skill in question is then increased by adding the product of the success margin, the amount of time covered by the test, and the relevant optimal result number. The optimal result number does not vary with the skill, and is based only on the type of skill use; ORNs for skill training are listed in the above table.

Decay

While we often hesitate to consider it, it is nonetheless true that we forget as much as we learn. As musicians, athletes, and computer programmers well know, only by constant effort can we keep a consistently high level of performance; this dilemma has been expressed as the Red Queen principle (“It takes all the running you can do just to stay in place.”). *Alternate Realities* has a Red Queen principle of its own, and it is commonly referred to as *Attribute Decay*. Attribute Decay occurs constantly, slowly eating away at the more volatile skills and attributes, and is an important element of character development in *AR*.

How Attribute Decay Works

It is recommended that decay be assessed on a weekly or monthly basis; more frequent tests may be made, but are likely to drive players insane. To determine decay for a given attribute,

first determine that attribute's *prerequisite* as described above, then subtract from this number the current attribute rating. Plug the result into the DRF; if the rolling target is positive, then ignore it (no loss occurs). If the rolling target is negative, multiply it by the amount of time covered by the decay assessment, and by the relevant decay factor from the attribute advancement table. The absolute value of this quantity is then subtracted from the relevant attribute, producing decay.

As noted previously, not all attributes decay at all. Decay, obviously, should only be assessed on those attributes for which it is relevant (including skills).

The Aging Process

In addition to the changes wrought by the intentional actions of the characters, natural processes have an impact on character development. Over time, characters will *age*, at first getting stronger and then, finally, wasting away into death.

How Aging Works

For each age-relevant attribute, the character must make a continuous form contest of AGE versus END with a penalty equal to the time period of the test (net result: this cancels the normal time period bonus). Multiply the success margin by the relevant optimal result number, which is equal to $(AGE-HMA)/HMA$ multiplied by the time period in years, and subtract the result from the attribute in question. To speed this process, the GM may allow players to roll for each Level 0 attribute and to modify the rest using the rules of inheritance; this is up to the GM. While the player may, of course, use discretion as to the time period of the roll, players are generally encouraged to make their aging tests every game year.

Supplemental Mechanics

While the attributes and tests are the basic mechanical principles of *Alternate Realities*, many game situations demand more specific mechanics to cover issues such as damage, healing, fatigue, and the like. To address these particular concerns, we have created rules for dealing with these game phenomena which are modular applications of more general rules; not all of these mechanics “packages” will be needed for all campaigns, and GM’s are encouraged to choose among them as dictated by the campaign’s level of complexity.

Damage, Incapacitation, and Scrap

It's a fact of life that things change. Mountains rise up, and are slowly ground to dust. Burgers are made, cooked, and eaten. Great warriors are cut down by well-placed blows. VCR's suddenly fail when the stars align improperly. In *AR*, this kind of behavior is encapsulated in the idea of *damage*. Damage is the extent to which some object is no longer what it was "originally" (i.e., when the interaction started); objects begin an interaction with some capacity to sustain damage, and as they suffer damage they are gradually (or not so gradually) altered until they can no longer be treated as the original object for rules purposes. At that point, an object is considered to be *incapacitated*. An incapacitated object has sustained enough damage to cause it to no longer function properly, but it may still be close enough to its original form to be restored to functionality by some repair process. In some cases, of course, an object is too far gone for this: it has sustained enough damage that it cannot be restored normally, and at best some of its parts could be used to repair some other object. In such cases, we say that the object has been *scrapped*.

By way of example, let us consider a fairly simple object, a longsword. A longsword can sustain a fair amount of damage and still be usable as a sword. It might be scratched or nicked, for instance, or perhaps bent very slightly, and still be functional (though possibly with penalties) as a sword. If, on the other hand, our hapless sword were heated and the edges dulled significantly, it might no longer serve in the same way and would be considered incapacitated as a sword. (Though it might, however, serve well as a club.) If the sword were then melted down and reforged as a plowshare, then we would say that it had been scrapped. It is no longer properly a "sword", though it *is* a new item with new properties (which could in turn, by the application of damage, be made into something else).

For objects in *AR*, the amount of damage sustainable before an object is scrapped is indicated in that object’s HIT attribute; the threshold at which such an object becomes incapacitated is given by $DRF(END)*HIT$ if the object has an END (or Quality) attribute. If the object does not have an END specified, it is assumed to be 0, and the object will become incapacitated when it sustains an amount of damage equal to $HIT/2$ (because $DRF(0)*HIT=0.5*HIT=HIT/2$). It may, of course, be objected that in some cases this line between normalcy, incapacitation, and scrap will seem arbitrary. This bothers the authors, too. :-) However, our experience has indicated that a system such as the one articulated here is sufficiently complex to allow for fairly realistic simulation of game events while remaining simple enough to be usable. As always, the rules can and should be adapted to suit the purposes of the players. If the GM wishes, the line between incapacitation and scrap may be erased, in order to speed and simplify game play; by the same token, ambitious GM's are invited to engineer their own, more detailed damage systems if they feel that the one here presented is overly simplistic.

Damage Types

In the real world, there are differences between damage sources. A hammer and a blowtorch may both be used to alter a piece of steel, but there is no question that they work in substantially different ways. In order to describe these dissimilarities between sources of damage, *Alternate Realities* considers damage to come in *types*. The damage type has no meaning per se (except for descriptive purposes), but it is important nonetheless, as it determines the particular DEM and DTM which will be used then inflicting damage on a target. We shall come to this last presently; for now, however, we shall confine ourselves to an enumeration of the particular types, and a brief description of each.

Name	Symbol	Description
Ballistic	B	Damage dealt by impact from a small, fast moving object
Corrosive	COR	Damage due to action of corrosives or solvents
Crushing	CR	Damage from compression
Cutting	C	Damage from cutting, or torsion, sources
Electrical	E	Damage which results from being a current conduit
Microwave	M	Damage from microwave radiation
Plasmal	P	Damage from <i>intense</i> energy sources (i.e., lasers, flames, etc.)
Radiative (Soft)	RS	Damage from low-energy (i.e., α) radiation
Radiative (Hard)	RH	Damage from high-energy (i.e., γ , X-ray) radiation
Impaling	I	Damage from impaling, stabbing, or tension sources
Thermal	T	Damage resulting from extreme temperatures

When dealing damage, find the appropriate description above and use the corresponding type. In some cases, new types may be needed; simply add them, and create new DEMs or DTMs as necessary. Generally speaking, it is unlikely that more than a few damage types will be used in any particular campaign, so don't get worried if the above looks too complicated. The purpose of having a large number of damage types is not to bog down game play with endless details, but to provide complexity when and where it is needed. Like the rest of AR's supplemental mechanics, damage types should only be used when players desire the realism they provide.

Taking Damage

Different objects react to different types of damage in different ways; to capture this effect, every object has associated with it two sets of attributes: Damage Transference Multipliers and Damage Effect Multipliers. A *Damage Transference Multiplier (DTM)* determines how much damage of a given type inflicted on an object actually effects the object, and how much of it is transferred to the next object in the attackers LOS; a *Damage Effect Multiplier (DEM)*, on the other hand, controls how that damage which **does** affect the object reduces the object's HIT score.

These attributes are used as follows: when damage of a given type is inflicted on an object, the corresponding DTM for that type is found, and the amount of damage multiplied by this number is deducted from the quantity which affects the target (this damage may be applied to the next object in the attacker's line of sight - see the section on cover for more information). Now, the DEM for the appropriate damage type is found, and the remaining damage is multiplied by this number. The result is subtracted from the object's HIT attribute, stress and/or fatigue is taken if applicable, and the attack is considered to have been resolved.

This obviously has the potential to get out of hand. To make life easier, the human body has a DEM of 1.0 for all damage types. (In other words, all AR damage is scaled based on its

effects on the human body.) The human body also has DTRs of 0 for *most* damage types; the full list can readily be found under the physical attributes for human flesh in the *Generic Lists*. If it is not clear in a given case what the appropriate multiplier is for a given object and damage type, try looking in the *Generic Lists* for an ancestor to the object in question, using the rule of inheritance to derive an appropriate attribute.

Example: Fred the Warrior is struck in the chest with a mace for 40 points of crushing damage. Fred's chest is armored with a breastplate which has a crushing DTM of 0.25 and a crushing DEM of 0.1. To find the amount of damage which is passed on by the breastplate, the GM multiplies the initial damage by the DTM. 40 multiplied by 0.25 is 10, so 10 points is passed on to the next object in the attacker's LOS (in this case, Fred) and 30 points is taken by the breastplate. To determine the effect of this damage on the breastplate, the GM now multiplies the remaining damage by the breastplate's DEM; 30 times 0.1 is 3, so Fred's breastplate loses 3 HITS. Since the breastplate doesn't take stress or fatigue, the effect of the attack on the breastplate is concluded, and the transferred damage is now considered...

Cover, Armor, and Damage Transference

One reasonably inevitable consequence of combat is that those who find themselves regular participants will take measures to avoid getting hurt. Historically, those measures have often involved armor, or, more generally, the use of *cover*.

Cover is provided by any object which interposes itself between an object which is attempting to inflict damage and its target. (Or, in other words, an object which is in the attack's line of sight (LOS).) In order to resolve an attack involving cover, it is first necessary for the GM to determine which hit locations of the target's are given cover; it is also necessary to determine which of these, if any, are visible and if so at what penalty. Once this is resolved, the attacker may attempt a called shot, which is resolved normally given any visibility penalties for the location in question. If the location which receives the damage is found to be one of those receiving cover, then damage is applied first to the covering object, in accordance with the rule of *damage transference*.

For any given damage type, an object has a particular attribute known as its *damage transference rating*. This is the percentage of damage of the indicated type which is allowed to pass through the object to anything lying beyond it; the remaining fraction is dealt to the object as per the normal rules on inflicting damage.

In the case of *armor*, for instance, the attack would be resolved normally given any restrictions on visibility. (Obviously, most armor will not provide a visibility penalty, since visibility refers to one's ability to accurately sight a target, not to see it per se; hence, it's not relevant that a person's gauntlet covers his or her hand: so long as you can sight the target area (the hand/gauntlet), you suffer no penalty.) The location hit, if any, would be identified, and the damage calculated. At that point, the damage is applied to the first object struck - in this case, the armor (provided that the relevant location was armored!). To determine the manner in which the damage is applied, first consult the relevant object's damage transference attribute for appropriate damage type and then multiply this by the amount of damage received. This result is immediately applied to the next object in line to take damage; the remainder constitutes damage actually taken by the first object (the armor).

As a final note, any "surplus" damage above and beyond that needed to scrap a blocking object is also added to the damage which transfers to the next object. The rationale for this should be obvious.

To get a feel for how this system works, let's consider an example. Packet Storm, cracker par excellence, is stalking down a back alley when a sniper attacks him. PS, in response, whips

out an H&K and starts blasting at his assailant. The sniper is crouched on the roof of the low building next to PS, and the GM rules that only his arms, head, and neck are exposed. Furthermore, the sniper is wearing body armor and a helmet. PS takes aim and fires off a single round; he tells the GM that he is aiming for the sniper's head, and hence he takes no penalty because the head is visible. (Had he aimed for the sniper's legs, on the other hand, he would have suffered a significant penalty due to the fact that he can't see them!) PS determines his rating, finds his corresponding target number, and rolls. Given his success margin, the GM finds that he has hit the sniper's body for 75 points of ballistic damage; however, the sniper's body is blocked, first by the wall and then by his body armor! Happily for PS, the wall is one of those newfangled models which is only 1 centimeter thick (a product of the latest round of "urban renewal" projects); its DTR for ballistic damage is 0% per cm, and its DEM is 80% for the same. Multiplying the DEM by the damage received, the GM rules that the wall takes 60 HITs; because the wall has a HIT rating of 40 points per cm³, 20 points of ballistic damage continue along the attacker's LOS (the GM notes that the effect of this on the wall as a whole can be ignored due to the effective impossibility of either player doing appreciable damage to it given the weapons they're using).

Having made it through the wall, the remaining damage now strikes the sniper's body armor. This armor happens to have a DTR of 10% for ballistic damage (it's hard stuff!), and hence takes 90% of the damage. Applying the 18 points of ballistic damage to the armor, the GM finds that the armor's HITs are not yet exhausted: the armor holds. The sniper takes the remaining 2 HITs worth of damage from the shot.

Stress, Fatigue, and Pain

Doing things requires energy. Sometimes, it requires a *lot* of it. Because even great heroes (most of them, anyway) have a finite supply of energy with which to do things, *AR* has been designed with a system for modeling *fatigue* (the body's response to physical use), *stress* (the mind's response to intellectual and psychological challenges), and *pain* (the mind/body response to damage). As with other aspects of the *AR* system, the level of realism delivered by the use of stress, fatigue, and pain may not be necessary or desired for all campaigns; in cases where characters are routinely expected to endure extreme psychological, physical, or mental challenges, however, use of these rules can greatly enhance the gaming experience.

Relevant Attributes

The four attributes most critical to stress, fatigue, and pain are *stamina* (STA; physical, level 2), *vim* (VIM; psycho-social, level 2), *fatigue* (supplemental attribute), and *stress* (supplemental attribute). Recall from the attribute definitions the following:

STA:

Reflects the character's ability to resist fatigue and physical damage; a measure of the operational resiliency of the character's body system.

VIM:

Describes the character's ability to resist psychological and mental stress, as well as the pain and anguish caused by physical injury; a measure of the operational resiliency of the character's psychological/mental system.

Fatigue:

An index of the current level of physical exhaustion and body system trauma facing the character.

Stress:

A measure of the current level of psycho-mental exhaustion, trauma, or anguish facing the character.

In dealing with stress, fatigue, and pain, note that STA and VIM reflect the general resiliency of the character, while fatigue and stress reflect the character's current state. (Consider the similar relationship between HIT, which represents the current physical integrity of the character's body, and END, which represents the overall "toughness" of the character.) Pain, as we shall see, is accounted for through stress and fatigue, and has no separate index.

The Effects of Stress and Fatigue

When performing any test, the sum of the character's stress and fatigue scores divided by four is subtracted from the character's rating before it is run through the DRF; hence, stress and fatigue each contribute their current values (divided by 4) as penalties to any character action requiring a test. Furthermore, the GM may require characters with high levels of stress and/or fatigue to make additional tests (above and beyond those normally required) to accomplish actions, at the GM's discretion. (Please note that the GM should not make tests themselves more difficult due to the character's stress or fatigue level, as this penalty is already captured by the above.)

Stress and fatigue have important consequences, which should be obvious upon reflection. A character will not perform as well when stressed or fatigued as under normal conditions, and is doubly impaired by the presence of both stress and fatigue. Players in campaigns which employ stress or fatigue, then, will have to take these things into account when making plans; it is imprudent to presume that one can operate in difficult conditions for long periods of time without needing a rest.

If high levels of stress and fatigue make it difficult for characters to act, even higher levels can be downright dangerous! As with HITs, a character who sustains a stress or fatigue level higher than $DRF(VIM) \cdot 10000$ (or STA, respectively) becomes scrapped; stress or fatigue higher than $DRF(VIM) \cdot 10000 \cdot DRF(VIM)$ (or STA, for fatigue) marks the incapacitation point, as it does for HITs. As usual, a scrapped character is dead, and cannot be "brought back" without some sort of reconstructive process. An incapacitated character is considered to be unconscious, a state which is generally disadvantageous except insofar as it makes it more difficult for a stubborn character to acquire yet more stress and fatigue through the exertion of effort. In many cases, characters (particularly the tougher ones) will become effectively incapacitated long before they are over the line. Such characters may simply lie about gasping in agony (unable even to make a STR test to stand up!), but will retain consciousness unless they either fall asleep or are caused to gain enough stress or fatigue to become incapacitated.

Acquiring Stress and Fatigue

There are a number of ways in which stress and fatigue can be acquired, but essentially all cases can be encapsulated in the following three categories:

Damage

Sustaining physical damage impairs a character's ability to act optimally, both through interference with the character's bodily functions and the pain associated with being wounded. *For this reason, damage sustained by a character is added to fatigue on a one-to-one basis (each point of damage recieved=one point of fatigue); unless a*

character is under the influence of a pain-blocking mechanism (such as an anesthetic, or a cybernetic implant), the character also receives stress on the same one-to-one basis (each point of damage=one point of stress). This is, in most campaigns, the most common means of acquiring stress and fatigue.

Effort

The character's nominal skill levels (and other attributes) reflect his or her ability to perform without undo effort. In many situations, however, this level of performance is insufficient; in order to improve on the default chance of success, then, a character may wish to expend extra effort. *For this reason, a character may "purchase" a one-time bonus to any skill or attribute test by agreeing to acquire a number of fatigue points (for a physical skill or attribute; stress otherwise) equal to the bonus.* The bonus is added (like any other) to the relevant rating before it is fed into the DRF (any penalties for previous fatigue and/or stress still apply); the stress or fatigue (whichever is appropriate) is acquired immediately after the roll resolves, and hence does not affect that particular roll.

Other Effects

Some objects (such as poisons or diseases) may have attributes which allow them to produce fatigue and/or stress in characters through means other than those indicated above. In such cases, the relevant attribute, object, or skill description will detail the manner in which such effects resolve. In general, however, it is wise to recall the basic definitions of the attributes involved, and to realize that pain (by itself) induces stress while anything which interferes with the body's normal functioning will produce fatigue. In some cases, an object may cause both...

Removing Stress and Fatigue

Having above considered the effects of stress and fatigue, as well as the ways in which they may be accrued, players will now be anxious to know how they may be gotten rid of. Players will be pleased to note that (due to the body's recuperative powers) stress and fatigue dissipate naturally; they may be less pleased with the fact that this process takes time to occur.

Dissipation of stress and/or fatigue is a continuous process, and is hence accomplished by the use of a continuous form test at the discretion of the player. The two cases work as follows:

Stress

The player must make a continuous form VIM test, *applying any penalties due to stress or fatigue.* Subtract the difference between the player's roll and the target number, and multiply the result (remember, it's a percentile!) by the optimal result number listed below. Subtract this result from the player's stress. This stress reduction occurs *after* the roll resolves, and hence obviously cannot affect the roll itself; *since stress and fatigue dissipation are considered to occur simultaneously, this improvement does not effect a fatigue dissipation check currently in progress.*

Fatigue

The player must make a continuous form STA test, *applying any penalties due to stress or fatigue.* Subtract the difference between the player's roll and the target number, and multiply the result (remember, it's a percentile!) by the optimal result number listed below. Subtract this result from the player's fatigue. This fatigue reduction occurs *after* the roll resolves, and hence obviously cannot affect the roll itself; *since stress and fatigue*

dissipation are considered to occur simultaneously, this improvement does not effect a stress dissipation check currently in progress.

The optimal result numbers are as follows:

Sleep or Unconsciousness

4 points per minute (240 per hour)

Strict Bed Rest

2 points per minute (120 per hour)

Bed Rest mixed with occasional Light Activity

1 point per minute (60 per hour)

Light Activity

0.5 points per minute (30 per hour)

Moderate Activity

No points per minute (This is the default condition)

Special Other

Some skills/attributes may give specialized activity numbers, in which case this will be specified along with the skill or attribute.

Remember to multiply the above optimal result by the number of minutes of activity, and to add the number of minutes as a bonus to the character's rating before applying the DRF!

If the above seems confusing, do note the similarity between stress/fatigue dissipation and combat: essentially, dissipation is an *attack* on stress or fatigue, using one's subnormal activity level as a *weapon*! (The primary difference lies in the fact that dissipation is continuous, whereas most attacks are not.) Note, too, the system's nonlinear behavior: as one becomes increasingly worn down it becomes more and more difficult to recover. Hence, a character may become winded by exerting a great deal of effort (and, perhaps, taking light damage) in combat and bounce back within an hour or so, but a character who has been severely wounded might take days of bed rest to recover sufficiently to perform at a normal level! Having a high STA, or VIM, helps too.

Healing and Repairing Damage

When an object has been scrapped, it may no longer be healed or repaired, and must be rebuilt or replaced; in many cases, however, an object may have sustained damage without having been scrapped. In these instances, healing and/or repair may be attempted as follows:

Healing

Some objects may possess the ability to automatically repair themselves; this type of damage dissipation is called *healing*. An object may heal itself by making a continuous form END test, multiplying the success margin by the optimal result number listed below. The ensuing value is added to the object's HIT attribute. As per the standard rules governing continuous form tests, the object's controller may decide when to make these tests (though some intervals will generally suggest themselves in play).

Unconsciousness/Sleeping/Strict Bed Rest

0.02 Points per minute (1.2 per hour, or apx 30 per day)

Light Activity

0.01 Points per minute (0.6 per hour, or apx 15 per day)

Moderate Activity

0.005 Points per minute (0.3 per hour, or apx 8 per day)

Repair

Certain skills and attributes allow for one object to actively repair damage to another (or, in some cases, to itself). In order to effect a repair, the object must supply any inputs needed, and must make a test of the relevant attribute. The result of the test roll is subtracted from the target number, and this percentage is multiplied by the relevant optimal result number (detailed with the skill or attribute). The result is added to the target's HIT attribute.

Magic, Psionics, and Strange Powers

While game-world staples such as magic, mental powers, or superhuman abilities might at first blush be seen as completely apart from many other aspects of the character environment, they are really no different once it is realized that *these features are nothing more than particular ways in which a character can influence the game environment* (or vice versa).

To see what is meant by this, let's think about a concrete example. Suppose we have a reality guide in which a particular ability exists, an ability which allows characters to modify metal objects, reshaping them in subtle or extreme ways. This ability requires certain material inputs (a hot fire, a hard surface, a pounding device) and draws on certain of the player's attributes. A super power? Not really; what we've just described is the blacksmithing skill! But now let's change this skill somewhat. Perhaps, for instance, we have a version of blacksmithing which draws not on physical strength, but instead on force of will. Instead of requiring a forge, our quasi-blacksmithing skill demands powdered rubies, which in the course of performing the skill are spread over the object to be reshaped. Now *this* sounds like magic! But what have we done, really? Nothing, except specified that in the rules of the world in question there is a skill other than the traditional blacksmithing skill which can be used to perform a similar function, albeit given different inputs. This brings us to a fundamental statement: *in AR, all character magic, psi, super powers, and the like are considered to be skills or secondary attributes*. Like all skills in AR, these are attributes of the character object, which allows us to clear up some other possible points of contention:

Powers Beyond the Characters' Ability to Change

As attributes, any abilities or super powers a character may have can be trained in accordance with the properties of the attribute. If a reality designer wishes for characters to be unable to alter this attribute (through training or otherwise), then this may be specified by a modification of the skill's training property.

Powers Beyond the Player's Control

If it is necessary for some reason to give a character a power or ability which the player is not permitted to control directly, then treat that ability as belonging to a separate object which is linked to the character in question. The GM may then treat this conceptual object as any other, with the character linked to the object being able to exert such control over it as is specified by that object's properties (which must, obviously, be delineated by the GM, or by the rules of the reality in question). For a related issue, see the discussion of enchantments, below.

Powers Possessed by Non-Character Objects

In some cases, reality designers may wish to allow non-character objects (such as a wand, for instance) to possess certain powers. As per the usual procedure, this is accomplished by reflecting the desired abilities or powers in the object's attributes. Recall that any object may be given any type of attribute; hence, a sword may be allowed to possess abnormally high intelligence, a language skill, a skill allowing it to make sounds without moving, etc. In theory, of course, such an object may even be treated as a character (even a player character!) object, as the distinction is merely one of convenience. If it is necessary at some time to have such an object acquire powers (as when under the influence of an enchantment, for instance) that it would not otherwise have, this should be reflected by altering the object's attributes in accordance with the properties of the object creating the alteration.

Where to Look for Power Related Attributes

Any special attributes (magical skills, psi powers, etc.) available in a given reality, along with some sample parent objects, will be found in the relevant reality module. A few additional examples may be drawn from the generic lists in the *Primary Reality Guide*.

Poison and Disease

Poison and disease, annoying as they are, are nonetheless important parts of life. In historical campaigns, in particular, poison and disease may prove to be far more of a threat than enemy swords! For this reason, *AR* has a mechanism for dealing with these scourges; further, these mechanics can be expanded to apply to almost any internal source of continuous damage.

When a character is poisoned, or suffering from an infection or other ailment, a new object is created which is linked to the character; this object represents the damage source. While the particular attributes of the object may vary somewhat given the type of malevolent force it represents (if so, these attributes will be specified separately, as usual), there are some basic constants which any will have:

STR

This represents the "toughness" of an infection, or the dosage of a poison. It is used by the object in dealing damage, and in resisting counterattacks from the host character.

Optimal attack result

This is simply the optimal result number of the poison/pathogen's attack. Because this is continuous damage, the optimal result will be given on a per minute basis. Note, too, that since different damage sources affect the player in different ways, the optimal result number will specify whether it constitutes HITS, stress (pain), fatigue, etc. (Sources which inflict more than one type of damage will have, obviously, more than one optimal result number.)

How Poison and Disease Work

As toxins and diseases deliver continuous damage, a continuous form DRF test is needed to determine their effect. As the disease or toxin is making the attack, the GM gets to determine the frequency of these tests, which work as follows: the attacking object's rating is equal to its STR minus the relevant attribute of its target (nominally STA) plus the number of minutes of effect

(after introduction, or since the last test). This is plugged into the DRF, the roll is made, the success margin is determined, and this is multiplied by the optimal result number(s) and the number of minutes of effect. These final results are applied to the relevant attributes of the target.

Even as the damage source is doing its work, however, the target is fighting back. Hence, whenever a continuous form DRF test is made by the attacking object, the host object may in turn make one of its own. The rating is equal to the relevant attribute (generally STA) minus the STR of the poison or disease, plus the number of minutes of effect. Once the success margin is determined, this is subtracted directly from the STR of the object. If the STR of the poison or disease is ever reduced to 0, the object is scrapped, and the character (if still alive) is saved.

Timing and Fast Action

Often, precise timing of game events is not necessary for game play. In certain situations, however, it may be desirable to have rules which establish an ordering of events in time; for this reason, we have included rules for timing and fast action.

Units

In *AR*, there are two basic units of time: the minute and the round. The minute is exactly what it appears to be: 60 seconds of game time. The round is much shorter, lasting only two seconds, and is the basic unit of fast action. Naturally, players and GMs may often wish to use other units (such as hours, days, weeks, etc.) to delineate game time, and extension of the mechanics described here to such situations should be trivial

Actions and the Standard Act

Another, more abstract unit which is key to *AR*'s timing system is the *standard act*. *The standard act represents that which the average person can accomplish in one second*. The number of standard acts a particular character can actually complete in one round is equal to twice that character's ACT macro; this macro (described previously) is derived from STR, INT, AGI, and DEX, though some realities may offer additional ways to modify it. Obviously, the average person has an ACT of 1.

Though it is all very well for different characters to act at different rates, not all actions are created equal; to deal with this fact, we use a concept known as the *action count*. The action count is a relative representation of the amount of time needed to perform a task. Like the rest of *AR*, action counts are handled in a decimal system: optimally, one may have 100 action counts per round (though the average is 50), and the *base cost* of a standard action is equal to 25 action counts. To find the real cost of an action (as we shall see) we divide the base cost by the actor's ACT macro; base costs of actions are typically based on the standard act, or are listed separately.

Characters need worry about the limitations posed by ACT only during high speed action such as combat, or other situations in which timing matters. In other cases, GMs are advised to use their discretion when determining what a character can and cannot do in a given length of time. Further discussion of this is provided in the side bar on "handling action."

Fast Action

When many things are happening at once and timing is of the essence, simple narrative adjudication can break down. To deal with these kinds of situations, *AR* includes rules for *fast action*. While combat is the fast action scenario which most gamers are likely to encounter

frequently, GMs and players alike should recall that these rules are generic, and may be used in any situation which demands them.

As stated previously, the basic unit of time during fast action is the two second *round*. The following rules are applied each and every round, until the situation which called for fast action is dissolved, at which point time may return to standard action mode.

Handling Action

Character action can take many forms, from skill use to attribute tests to dialogue. Managing this action is an important task of the GM; success at this can make or break some types of campaign. Because of the importance of handling action, we've included a few suggestions so as to aid the GM in this task.

Dialogue is an important part of character action, one whose importance is, unfortunately, often underestimated. GMs are encouraged to allow dialogue to be conducted in "real time"; that is, if two characters get a chance to confer for 30 seconds of game time, give the players 30 seconds of real time to discuss their actions (and enforce it!). Likewise, if the party spends an hour discussing strategy and wishes to know how much game time has passed, the GM should tell the group that their discussion took one hour. While this may seem overly strict in some respects, it can add a great deal to the role-playing experience by forcing players to cope with the same limitations as those faced by their characters.

Another option for handling dialogue is the note system; this is especially useful when different characters have access to different information. Each player and the GM uses a notepad to selectively communicate with other players (by writing and passing notes). This method works very well during fast action, when characters are often unable to compare their perceptions with those of others, but may be employed at other times as well.

Generally, attribute tests (including the use of skills) are pretty straightforward. In some cases, however, this type of action may present logistical challenges (as when some characters should not be able to observe the outcome of another character's test). In such situations, concealing rolls, using the note system, and even temporarily separating the players may prove useful...the GM should be careful, however, not to disrupt game play too much! Likewise, the GM should apply discretion to questions of timing not governed by the fast action rules; a good rule of thumb is to think of a comparable real-world example of a similar action and to extrapolate from there. The success margin of the relevant test may be helpful, too, since it may be interpreted as an indicator of the length of time consumed by the action.

characters must refresh their ACT Counts. To do this, the character must make a standard form INI test with an optimal result number of 50, add the result of this test to 50 (creating a number between 0 and 100), and, in turn, add this to his or her ACT Count.

Taking Action

The ACT Count

From the moment fast action begins, each character has a temporary attribute known as the *ACT Count*. The ACT Count is, in a sense, a kind of "currency" which may be used to "buy" actions; the "cost" of an action is deducted from the ACT Count, as described below.

Starting Fast Action

Initially, each character's ACT Count begins at 0. This, however, may be changed by the GM, who may give positive or negative counts to characters based on their readiness at the beginning of a fast action sequence. Thus, a character waiting in ambush is likely to have an initial ACT Count which is greater than 0; his or her victim might have a positive count if alert and prepared, or a negative one if caught completely by surprise.

The Beginning of Each Round

At the beginning of each fast action round,

If any character has an ACT Count which is greater than 0, the character with the highest ACT Count may now take an action. (If two or more characters have the same ACT Counts, the first mover will be the one with the highest INI.) To take an action, the character's player simply announces his or her intent, and deducts the real action cost from his or her ACT Count. The real action cost is equal to the base action cost for that particular action divided by the character's ACT macro: hence, characters with high INIs not only get (on average) more chances to act, but they also can accomplish standard tasks more rapidly!

The action, once announced, cannot normally be aborted; except as noted otherwise, actions resolve at the *end* of their count cost (when the character is able (or would be able) to declare his or her next action). It is possible (and even normal) for the cost of a task to drop a character's ACT Count below 0. Such a deficit will carry over into the next round.

Ending the Round

The above process should be repeated until no characters are able to act. At this point, the round is concluded and the new round begins (if necessary). Actions which carry over into the new round will resolve normally (when their count cost is realized), and may not be aborted unless such an option would normally be available.

Special Actions

In most cases, base action costs may be determined by considering the fact that a "normal" person will, on average be able to perform one 25 point action per second (two per round). Certain types of action, however, demand special consideration:

Dodging

When a character stands to be struck by something, it behooves him or her to get out of the way. As this type of activity takes place rapidly, and since the timing of a dodge is critical, it is considered to be a fast action. To attempt to dodge a damage source, the damage source must be known to the character; one cannot dodge that of which one is unaware.

The dodge itself is executed by making a standard form test of the character's dodge skill (or AGI; the player may choose). *This test must be made **after** the attack has been declared, but **before** it is resolved!* (Obviously, this can only occur if the defender has is able to act during this period!) Note the success margin of the dodge role (whether positive or negative); this number is *subtracted* from the attacker's success margin. The net effect of this is to allow successful dodges to reduce or even evade completely a damage source, without neglecting the hard reality that a poorly executed dodge (into the enemy's line of fire, for instance) can actually make things worse for the character.

GMs should bear in mind that a dodge, whether successful or not, causes a character to be mobile, which may produce penalties for the attacker. A dodge has a base cost of 25 ACT Counts.

Parrying

In some cases, it makes less sense to try to evade an attack than to attempt to interpose another object between oneself and the damage source. This type of action is known as a *parry*. Much like the dodge, a parry is executed by making a standard form contest between the character's skill and the attacker's skill; in this case, however, the character's skill is either the relevant weapon skill, martial art form, or AGI. If a weapon

or other implement is being used, the weapon's *precision* is added to the appropriate rating. *Unlike the dodge, this test is made **after** the attacker's roll has been made, but **before** damage is applied!* (Thus, the character must be able to act between the moment of the attack's declaration and its resolution.) If the test is successful (positive success margin), then the limb or implement being used becomes the first target in the attacker's LOS, and takes the full force of the attack as per the rules on cover and damage transference. If the test is not successful, the parry fails and the attack proceeds normally.

The parry, like the dodge, is an action which may impose penalties on an attacker due to the character's movement. A parry costs a number of ACT Counts equal to the number of ACT Counts used by the attack being blocked; an implement may only be used in a parry if its SF (speed factor) is faster than or equivalent to the weapon of the attacker.

Making Attacks

The base cost of an attack is equal to the weapon's SF. If no weapon is being used, the attack has a base cost of 25 ACT Counts, unless a martial arts form is in use. Such a skill will dictate the speed of the relevant action, in this case.

To resolve an attack, find the relevant weapon or combat skill, add any bonuses or penalties, and plug it into the DRF. This will give yield the rolling target; make the roll to find the success margin. If the success margin is at or below 0, the attack missed. Otherwise, the attack has been at least partially successful: some part of the target has been struck. To find the particular location hit, consult the relevant target web: if a called shot was made, follow the path from the intended target until the a point is reached at which the success margin is larger than the hit requirement. Once the location has been determined, damage is applied as per the rules on inflicting damage (above), and the attack is considered resolved.

The Game Environment

Just as it is important to keep track of the characters and their actions, so too is the game environment an object of real concern. To facilitate the process of creating and GMing realities we have introduced several tools, all of which are based on our object system. In particular, generic parent objects allow GMs to improvise new game elements quickly and easily, and make it easier for reality designers to quickly flesh out worlds. By the same token, cultural description objects provide a “shorthand,” character-like system for describing whole societies. Ultimately, similar systems will be in place to allow the rapid production of whole worlds; in this version of *Alternate Realities*, however, designers will have to rely on these more basic tools.

Generic Parent Objects

As noted in an earlier section, “things” in *AR* are conceptualized as “objects,” which “inherit” properties from their “parents” and pass them on to their “children.” This allows us to introduce a class of excellent tools for GMs and reality designers alike: *generic parent objects*. What is a generic parent object, you ask? GPOs are “generic” objects for classes of items, materials, etc. which can be used as parents for specific instances of those items, thus allowing for on-the-fly creation of new items without having to literally reinvent the wheel.

In plain English, what this means is that you can have a GPO for something like, say, a longsword, and quickly create a specific item (such as a high-quality, jewel-pommel sword) from the generic object without having to come up with the stats all over again. Furthermore, the sword itself can be derived from parents - such as a generic metal tool, generic steel, etc. - and can implicitly carry their attributes (such as obscure DEMs) without having to have these written down in detail.

This makes creating new and unusual objects for different game worlds much easier than it might be otherwise. If your new reality has a substance called StrongStuff which is incredibly resistant to cutting, piercing, electricity, and heat, but which is radiation-permeable and prone to shattering, there’s no need for you to dictate this on each and every object made from it. Instead, make StrongStuff a *parent* of various generic children, which in turn may add new properties which can be referred to if need be without having to mark them down on anyone’s character sheet.

To facilitate the use of generic parent objects, the *Primary Reality Guide* includes a list of a wide variety of parents, with lineages and attributes specified. To add your own, simply edit the existing list or make a new one, indicating to which objects your own refer. You can also easily change aspects of a reality by altering the generic parents; this is a great, quick way to design your own realities with a minimum of effort (for you, or for your players), as you will only have to alter the behavior of these game elements in one place (letting inheritance do the rest).

Cultural Description Objects

Cultural Description Objects (CDOs) are a class of objects which can serve as a shorthand for GMs and reality designers who need a standard way to refer to societies in the game environment. Each society has a CDO whose attributes define its properties; it may also be thought of as having subcultural children who inherit properties from their cultural parent. While the CDO is primarily a tool for quickly encoding cultural information, it has other uses as well: certain CDO attributes may affect players in concrete ways, and, ultimately, rules may even be devised for allowing CDOs to act as “characters” themselves!

CDO Attributes

Like other objects, CDOs have attributes. Furthermore, CDO attributes are defined in Level 0, Level 1, etc., terms, just like player attributes. For information regarding the difference between higher and lower level attributes, readers are referred to the earlier section on the *AR* character.

Level 0

Cultural

Modernity

A wide array of sociologists of the 19th and 20th centuries identified a fundamental process of change which brought cultures from their “primitive” beginnings to a state known as “modernity.” While this has proven to be less than effective as a scientific principle, the idea of modernity as a dimension of cultural description holds up well enough (and is easy enough to grasp) to serve as a CDO attribute. With this in mind, modernity should be thought of as an abstract agglomeration of traits such as rationalization, institutionalization, individualization, etc. These are broken down in greater detail in the Level 1 cultural attributes, which are based on the five pattern variables of Talcott Parsons’ AGIL scheme.

Scientific

Scientific Sophistication

“Science” being here defined as the whole body of knowledge concerning the physical world, its history, and its laws, “scientific sophistication” gives an overall index of the degree to which a particular culture has developed and integrated an understanding of its environment.

Technological

Technological Capability

Where science represents knowledge concerning the universe of observables, technology reflects mastery over the same. While there is some linkage between scientific and technological capabilities, this connection is extremely weak (particularly at low levels); it is possible, generally speaking, to have excellent technological expertise without great scientific understanding. “Technological capability,” then, reflects the development of this expertise and its integration with the larger social structure.

Economic

Economic Development

There are a nearly infinite number of ways to allocate scarce resources in a society; economic development refers to the complexity, efficiency, and overall sophistication of the systems which perform this role.

Political

Political Intensity

Power can be dealt with in many ways, and the allocation and organization of overt power in society is critical to the nature of life within it. “Political intensity”, as it were, is an overall measure of the complexity, sophistication, and force with which people in a culture handle questions of control.

Level 1

Cultural

Mobility

Mobility indicates the degree to which one's social standing may be altered (for better or for worse) by individual choices and/or acts of fate. In highly stratified societies (such as aristocracies), mobility is highly restricted; paradoxically, this is also true of extremely "flat" societies (such as certain tribal groupings) simply because there is so little hierarchy in which to move! Societies with high levels of mobility, then, must have well-developed, yet flexible, hierarchies; high levels of mobility contribute to modernity.

Universality

Universality is an overall cultural predisposition towards generic, abstract means of dealing with (especially social) reality. Societies which are highly universal, for instance, tend to argue over "precedents," "principles," and the like; highly particularistic societies, by contrast, are likely to treat events as separate, incomparable occurrences. As one would expect, universality is considered to be a "modern" trait.

Mean Role Specificity

In some societies, roles are very broadly defined; a tribal chief, for instance, may wield religious, political, economic, and military power with equal aplomb. Other cultures, however, tend to have roles which are far more specific: a corporate accountant may have significant economic power (at least within a particular organization) but is unlikely to be able to raise an army. This difference, between a notion of roles as being all-encompassing and diffuse and a concept of roles as narrow and constrained by circumstances, is expressed as mean role specificity. Increasing role specificity is considered to be typical of modernity.

Affective Neutrality

Different cultures deal with affect (the behavioral expression of one's internal emotional state) in markedly different ways: highly affective societies respect (and even demand) open displays of emotion, while more affectively neutral ones require that one's own feelings be suppressed in public settings. A famous criterion of modernization is an overall shift towards affective neutrality.

Individualism

Most societies evince some tension between the idea of the individual as an important, independent entity, and the notion of the group as being the pre-eminent concern. Highly collectivistic societies, for instance, do not consider the individual to be a privileged unit with its own special rights. Individualistic societies, by contrast, may hold individual welfare and initiative above any group consideration. In general, a trend towards individualism is considered to be an element of modernity.

Scientific**Median Education Level**

The median education level of the society refers to, in essence, the level of knowledge which an "average" person would have. This knowledge does not necessarily have to be acquired through formal study, nor need it be credentialed in any way. It is, for instance, possible to have a society with a very high median education level in which few individuals have actually attended educational institutions, or (just as likely!) one may have a society in which individuals spend years and years attaining "degrees" without learning much of anything.

Educational Legitimacy

The educational legitimacy of a society reflects the degree to which members of the society are willing to defer to the authority of knowledge as it is understood by the group in question. This authority may be metered by specific credentials (such as, in our culture, the Ph.D.), or may be demonstrated in some other manner (performance in a debate for instance, as on USENET). However it may be described, a culture with low educational legitimacy will tend to ignore the recommendations of its learned members, and a culture with high educational legitimacy will hang on their every word.

Concentration of Education

In statistical terms, this represents the third moment, or skew, of the distribution of education in society. In plain English, the concentration of education gives information regarding how individuals may deviate from the median education level. At low levels of concentration, there is little variance - few if any individuals are substantially off of the mean. At high levels, however, a small number of people may have education levels far above the median value for the population at large. Taken together, the median education level and the concentration of education present a reasonably good picture of the distribution of knowledge within a society.

Educational Scope

In some societies, knowledge regarding “the way things are” is considered to be very remote from the ordinary tasks of day-to-day existence. In others, however, one is expected to have a working knowledge of the nature of things, and to integrate this knowledge with one’s actions. Societies of the first type have a very narrow (or low) educational scope, while those of the second have a very wide (or high) level of scope. Generally speaking, the greater the educational scope of a society, the more knowledge is demanded of individuals, and the more often these demands are made.

Scientific Dynamism

Scientific dynamism is, in a nutshell, the speed at which a society’s understanding of the observable universe is increasing. Societies with high rates of scientific dynamism (say, the US during the period from 1860-1880) face a rapidly evolving knowledge base, while those with relatively low rates (perhaps Japan from 1600-1700) tend to be relatively static.

Technological

Median Technology Level

The median technology level of a society is, generally, the sophistication of the technology which is accessible to the “average” person. While the range of technologies available may vary greatly (as in many third world countries), the median technology level indicates that which more or less ordinary people are likely to use.

Technological Legitimacy

The legitimacy of technology in a society represents the degree to which technological solutions (and the perspectives of those who proffer them) are viewed as authoritative. Societies with low levels of technological legitimacy may view new devices with suspicion, or even hostility; those in which technology is highly legitimate, on the other hand, may see innovation as the answer to each and every problem! (Note that this refers to *technological* know-how, not human knowledge per se. The two are not identical.)

Concentration of Technology

As with concentration of education, concentration of technology provides an index of the degree to which certain individuals may deviate from the median. In societies with a high degree of technological concentration, this means that a small number of persons have access to the vast majority of the most sophisticated technologies available, while the “little people” live in a comparatively primitive state. Societies with low concentrations are, by contrast, relatively homogeneous: almost all members have access to the same tools.

Scope of Technology

The scope of technology in a society is the degree to which explicitly “technological” issues dominate life. In societies where technological expertise is a prerequisite for success, where choices between technologies can shape lifestyles, etc., technology has a very wide scope. This is very different from narrow scope societies, in which technological issues are thought of as being isolated from day to day life (when they are thought of at all!).

Technological Dynamism

Technological dynamism describes the degree of technological “progress” in society at large. Highly dynamic societies may face “instant obsolescence,” massive and continuous product innovations, and shifting skill sets, while persons in less dynamic societies may pass the same tools and techniques down through generations.

Economic

Median Wealth

The median wealth of a society is, as one would expect, the median access to material goods (including food, transportation, shelter, etc.). Obviously, not everyone in most societies lives at the median wealth level!

Legitimacy of Economic Behavior

Societies vary widely in how they view explicitly economic behavior: some hold any task as sacred if it is undertaken for purposes of profit, while others eschew any behavior which is explicitly economic in nature. When economic behavior is highly legitimate, the prerogatives and perspectives of economic actors (such as business folk) may be privileged above others.

Concentration of Wealth

It is not at all atypical to find significant disparities of wealth within the same society...such societies are said to exhibit high levels of concentration of wealth. This attribute expresses the degree to which some persons deviate from the median wealth level, and may vary widely from society to society (and from time to time).

Organizational Scope

Organizational scope expresses the degree to which economic institutions and, more generally, the paradigm of explicitly economic behavior penetrates the daily life of the average person. When organizational scope is high, persons are expected to structure their lives around economic (and possibly corporate) prerogatives, while a low organizational scope is often characterized by an overtly lackadaisical attitude towards production.

Economic Dynamism

While less obvious than scientific or technological dynamism, economic dynamism is no less an important cultural attribute. Economic dynamism refers to the rate of change in the economic and institutional arrangement of society. When this attribute is high, the structures of production, trade, and consumption are in

constant flux, with new organizational forms and techniques displacing the old; low levels of economic dynamism characterize stable (possibly regimented) societies in which the rhythms of buying and selling have gone on unchanged for many years.

Political

Median Power

The median power level provides an index of the ability of the average person to control the circumstances under which he or she lives. The more regimented the society, the lower the median power level...this regimentation may be overt and coercive, or subtle and inductive. Note that it is possible to have cultures with very low median power attributes which are homogeneous (if, for instance, all members were bound to a certain, highly restrictive, creed).

Political Legitimacy

Political legitimacy describes the credibility and authority of political power. In societies with high levels of political legitimacy, solutions based on "policy" are likely to be respected, along with anything else seen as deriving from the supposed foundation of the current system (be it the divine right of kings, the consent of the people, natural law, or human freedom). Cultures with low levels of political legitimacy may well be unstable (though they don't have to be); in any case, the average person will have little respect for whatever dictates the system provides.

Concentration of Power

Societies which exhibit high levels of concentration with respect to power are sharply divided into the rulers and the governed. Those with extremely low levels of concentration, however, (such as anarchies) allow each person to be his or her own ruler. This will, however, still interact with the median power level: homogeneous societies with low median power levels will seem "paralyzed," while those with very high power levels (small direct democracies, perhaps) may be subject to nearly schizophrenic policy shifts.

Political Scope

The political scope of a society determines the degree to which explicit considerations of power and authority enter into daily life. In extremely politicized societies, even small actions may have appreciable consequences and intrigues abound. Societies with lower levels of political scope may be less power-focused - or persons in them may not be able to change anything!

Political Dynamism

Like economic dynamism, political dynamism is concerned with the degree to which a society is changing. Societies with high levels of political dynamism exhibit massive power shifts (such as coups or revolutions) while those which are less dynamic may remain politically static for long periods of time.

Additional Considerations

To use the CDO, one simply picks the culture or society which one seeks to describe and rates it on the attributes above. In addition, the GM or reality designer who produces a given CDO should provide a brief description of the society to supplement and/or help explain the attribute ratings. While the current specification for the CDO goes a long way towards creating a simple, universal method for describing social structures, more work in this area is still needed. At present, then, GMs are advised to supplement CDOs as required.

GMing Alternate Realities

Because it departs in some ways from other role playing systems, and because not everyone who happens to want to run an *AR* campaign is expected to be a veteran, we have included this brief section of advice for the *Alternate Realities* GM. Because there is no “right” or “wrong” way to run a campaign, and because the only judge that really matters is player consensus, don’t take this (or anything else in the *Guide*) as holy writ.

Choosing a Level of Complexity

AR was designed to give GMs the unprecedented power of being able to choose a level of rule complexity without having to move to a different role-playing system. This capability can be extremely liberating: among other things, it means that the same basic rules can be used for story-oriented and simulation-oriented campaigns; new players and GMs can start with simple mechanics and move to more complex ones; and the GM is free to put rule complexity where it is needed (eliminating it where unnecessary). At the same time, however, the need to choose complexity levels can pose problems for new GMs. How does one decide on campaign complexity? How will that decision affect game play? And, most importantly, how can you change your mind once the game is in session? To help settle these issues, we offer some basic advice.

The Meaning of Complexity

As has been discussed elsewhere in this *Guide*, attributes come in *levels*. The lowest level attributes - Level 0 - are used always, and form the basis for the others. Level 0 attributes give only the most primitive sort of descriptive information, but are fast and easy to use. Level 1 attributes, by contrast, dig deeper, and serve to describe different character capabilities in greater detail. Level 2, in turn, is composed of *very* specific attributes which expand upon those in Level 1, and so it goes: supplemental, or “∞-1” attributes, dictate narrow aspects of the character’s persona, and ∞ attributes (or skills) are the narrowest of all.

So, to start with, the level of complexity which you choose will determine which attributes may be used to describe characters. The higher the level of complexity, the more precise the description can be. But the issue is more complicated than that: in addition to choosing attributes, complexity decisions implicitly control which rules will be used in play! This is because some rules (such as the fatigue system, or fast action) draw on specific attributes in order to function. If those attributes are not in play, these rules are not applicable either. On the other hand, it *is* possible (and expected) for the GM to specify particular attributes which will be used regardless of level; in that way, the GM can ensure that the appropriate subsystems are in place for realistic play.

Why, then, if complexity enhances the sophistication of the rules which can be used, would anyone choose to use low levels of complexity? The answer, in short, is that carrying the detail of high-level attributes adds overhead to game play which may in some cases be unnecessary - or even detrimental. Given that attributes must be maintained, having the full Level 2 suite could be seen by many players as cruel and unusual punishment. After some experience in the field, the GM may agree: with approximately 60 standard attributes to keep track of, even simple actions may prove taxing (unless, of course, the GM ignores most of the attributes, which would defeat the purpose)! The goal, then, is neither to move towards high, nor low levels of complexity, but rather to choose the right kinds of rules and attributes for the situation at hand.

What Level Works for You?

How, then, do you go about setting a level of detail? Often, you'll have help: *AR Reality Guides* typically recommend certain attributes, depending on the nature and theme of the game environment. Otherwise, the decision rests on what you (and the players!) want to get out of the campaign. Does your group expect to encounter brutal firefights? Do they plan to execute complex schemes? These type of behaviors demand *simulation*, which is to say outcomes which are dictated by more-or-less impartial rules (rather than consensus or fiat). On the other hand, perhaps your group plans to spend a lot of time acting, or engaging in other social behaviors. In some cases, these types of game scenarios can call for a *story-oriented* approach. Story-oriented campaigns place outcomes at the feet of the player-GM consensus, and typically are inhibited by a great deal of detail in the rule system.

After giving some thought, then, to the manner in which you expect the players to conduct themselves, you should now consider a few specifics. Go to each of the four attribute categories - mental, physical, psycho-social, and sensory - and ask yourself how much simulation each of these will need. If a great deal of melee combat is expected, for instance, physical attributes must be well-represented if realism is to be maintained. If, on the other hand, fights are unlikely but mind games are afoot, psycho-social attributes may be needed. In every category, determine what your players will require, and set complexity accordingly. Remember that you can always use skills and supplementals to "take up the slack" if need be, so be ruthless: attributes can be always be added later.

Implementing the Decision

To implement your decision, let your players know which attributes are expected. If characters have already been made, check to ensure that the requisite detail level has been covered. If not, complexity can be added by using attribute dependencies. Should an overzealous player have fleshed out additional levels of detail, this need cause no problem; simply don't use these attributes! Otherwise, a pared-down version of the character can be produced for this particular campaign.

Changing Over During Play

Should you decide that more (or less) detail is needed during play, simply follow the rules above. Make certain that all players are informed of the changeover, however, and be sure that the changes are approved of! Radical rule changes in the midst of an intense campaign are unwise, as they alter the look and feel of game play, but may be just the thing to jump-start an ailing adventure. Caution is advised, regardless.

Final Thoughts

Ultimately, practice is the only way to get a feel for how much detail is needed in a given campaign. When starting out, we recommend that you use the bare minimum needed in order to keep players from getting bogged down in petty details; furthermore, a simple (say, Level 0) character can be made quickly, allowing gamers to start playing promptly. As you gain experience, you will become better equipped to judge your attribute needs, and can expand to higher levels of complexity.

Rewards and Penalties

While most of the fun of role-playing (for the authors, anyway) is contained in the satisfaction of weaving a good story (and portraying a character well), most players and GM's like to have a system for rewarding exceptional role playing and penalizing those who make a habit of being "out of character". In many systems, this idea of rewards and penalties is embedded in the game mechanics in the form of "points" which are given to characters at the end of an adventure, and which may be "spent" on improving the character. As has been noted, *AR* does not rely on such a system for character advancement; *AR* characters improve like everyone else, through hard work! While we feel that this leads to better, more realistic role playing, we recognize that some players and GM's may be at a loss as to how to encourage good gaming in the absence of a simple, point based reward system. To those in this conundrum, we offer the following three suggestions:

Consider the Consequences

In the real world, the "roles" we play have consequences, as does our ability to play them. Why should this be different in a game context? Inappropriate behavior on the part of players (via their characters) should certainly arouse attention, and possibly retribution. A king, for instance, who insisted on roaming about unattended in strange places might well be labeled insane; in any case, he would surely be subject to assassination attempts, and possible grabs at the throne! By thinking through the consequences of character behaviors, GMs can usually encourage good role playing while increasing realism, interest, and fun for all involved.

The Hand of Fate

Even in the most simulation-oriented of campaigns, the GM has a great deal of discretion over the course of events which befall the characters. A policy of giving subtle "lucky breaks" to characters whose players are doing a good job (and, perhaps, unlucky occurrences to those who aren't) can make good players feel valued and can help players to realize when they're getting off-track (it's not always obvious!). Use this sparingly, however, or else things may go awry: some players may feel that others are receiving unfair treatment; a group may get used to "favors", and may expect the GM to extricate them from every eventuality; or the players may simply feel that "fate" has too much influence over their character's lives and lose interest. Knowing how much prodding a given group needs is a skill to be cultivated (though observation and hard experience) by would-be GMs.

Avoiding the Situation

In some cases, a GM may discover that one or more players simply cannot accurately role-play a particular scenario, even when prodding is given and the consequences of character actions are evaluated. This is a particularly common problem in historical campaigns, when players may be called upon to play the parts of characters whose beliefs and values are disagreeable (or even abhorrent) by today's standards. In some cases, cross-gender play (in which a male plays a female character, or vice versa) can present similar difficulties. If these dilemmas arise, it can be important to face the players' limitations and to attempt to avoid placing them in the problem situations, sometimes even to the extent of prohibiting certain persons from playing certain types of characters. *Great* care and a finely tuned sense of the players' needs and abilities are essential here; telling a player that he or she simply isn't up to the challenge of accurately depicting a 19th century plantation owner with an 80 IQ may harm that player's pride, damage your relationship

with them, and perhaps even splinter your entire group! Likewise, structuring campaigns so as to stay within everyone's "area of expertise" may frustrate players' desires to test themselves and to become better role-players. The ideal GM always knows how to challenge players without taking them completely out of their depth; in reality, this is a very difficult skill, and most of us (the authors prominently included!) have a long way to go before we are able to master it.

Authority and Decision Making

Alternate Realities is expressly designed for player input. Every aspect of the system, from rules to attributes to mechanical details, is subject to modification and expansion. Generally, we doubt that anyone will see this as a disadvantage; however, tensions may arise when GMs who are used to having tight control over the game environment are forced to answer to players who have gotten used to being empowered.

Exactly how much of a problem this will be is likely to depend on the GM and on the particular players involved. Experienced gamers, for instance, are unlikely to notice any ill effects, and are likely to proceed without incident. Some newer role-players, however (GMs especially) may be unnerved at what they may perceive as a lack of structure in the AR system. Where are the hard and fast rules? Where are the massive claims to GM fiat? Where is the Voice of the Author (C), demanding that everything be conducted in accordance with the Original Intent of the Creators (TM)?

The answer, really, is that *Alternate Realities* has these things in no smaller quantity than any other gaming system...but the authors of AR are (in their collective opinion) simply more realistic about it. We know that, in reality, it is *always* the consensus of the gaming group which determines the way in which things are done (not GM fiat, and certainly not the hollow dictates of some musty rule book!); instead of hiding this, we flaunt it! AR has been made by gamers, for gamers, under the principle that *all* role-players possess (at least latently) the capacity to manage themselves in a more or less orderly fashion.

What this means for AR GMs is that business continues as usual, but neither players nor GMs can gain the satisfaction of citing The Authors (TM) to browbeat others into accepting their particular visions of how the game is to work. The GM is given these guidelines, and left to craft a game; whether or not he or she does a good job will be indicated by the willingness of players to accept the GM's authority.

That's the way it's always been. We just put it in black and white for you. :-)

Conclusion

Obviously, there's no simple formula for role-playing success. Each GM has to find his or her own way of doing things, and each group has to grow to understand its own limitations and possibilities. It is hoped, however, that the above advice will prove useful to GMs and players alike, particularly those who are unused to the more innovative features of the AR system.

Alternate Realities “How To” Guide

While good understanding of a role-playing system can aid in the enjoyment of playing it, *Alternate Realities* has been designed in such a way that it is possible to play - and even GM - in an AR campaign without having a real sense of “how things work.” While we have tried to be explicit throughout the *Primary Reality Guide* as to the mechanisms which underlie the AR system, we also understand that many players are eager to go straight to the game play. With this in mind, we have here included a “How To” guide, which gives detailed instructions on how to perform common AR tasks. While these quick hints don’t enumerate every circumstance which is likely to arise, they are sufficient to cover the basics.

How to Use the DRF (and its Inverse)

1. Find the rating (or percentile, if using the inverse) which is to be operated upon.
2. If using a DRF chart, locate (1) on the axis which lists ratings (or percentiles).
3. If using a DRF chart, locate the point which corresponds to (2) on the other axis. This is the percentile (or rating) which is sought.
4. If using a DRF table (or inverse DRF table, if appropriate), locate (1) on the left-hand side.
5. If using a DRF table, find the number which corresponds to (4) on the right-hand side. This is the percentile (or rating) which is sought.

6. If using a computational device to find the DRF of (1), enter

$$v = 0.31831 \tan^{-1}(0.031831r) + 0.5$$

where v = percentile result and r = rating.

into a computer or calculator (being sure to use radians); replace r with (1) in the above. The output will be the required percentile.

7. If using a computational device to find the inverse DRF of (1), enter

$$r = 31.4159 \tan(3.14159v - 1.57096)$$

into a computer or calculator (being sure to use radians); replace v with (1) in the above. The output will be the required percentile.

How to Perform a Standard Form Test

1. Find the rating of the attribute or skill being tested, after applying all modifiers.
2. Find the DRF of the result in (1); this will be a percentile (between 0 and 1).
3. Roll d100.
4. Subtract the result of (2) from the result of (3).
5. If applicable, multiply (4) by the optimal result number for the test.
6. The result of (5), if applicable, is the outcome of the test (in the units of the ORN); otherwise, the outcome of the test is the result of (4) (in raw percentiles).

How to Perform a Continuous Form Test

1. Find the rating of the attribute or skill being tested, after applying all modifiers.
2. Add the elapsed time in minutes to (1).
3. Find the DRF of the result in (2); this will be a percentile (between 0 and 1).
4. Roll d100.

5. Subtract the result of (3) from the result of (4).
6. If applicable, multiply (5) by the optimal result number for the test, and multiply this by the elapsed time (in the same time unit as the ORN)
7. The result of (6), if applicable, is the outcome of the test (in the units of the ORN/time); otherwise, the outcome of the test is the result of (5) (in raw percentiles).

How to Perform a Standard Form Contest

1. Find the rating of the first attribute or skill being tested, after applying all modifiers.
2. Find the rating of the second attribute or skill being tested, after applying all modifiers.
3. Subtract (2) from (1).
4. Find the DRF of the result in (3); this will be a percentile (between 0 and 1).
5. Roll d100.
6. Subtract the result of (4) from the result of (5).
7. If applicable, multiply (6) by the optimal result number for the test.
8. The result of (7), if applicable, is the outcome of the test (in the units of the ORN); otherwise, the outcome of the test is the result of (6) (in raw percentiles).

How to Perform a Continuous Form Contest

1. Find the rating of the first attribute or skill being tested, after applying all modifiers.
2. Find the rating of the second attribute or skill being tested, after applying all modifiers.
3. Subtract (2) from (1).
4. Add the elapsed time in minutes to (3).
5. Find the DRF of the result in (4); this will be a percentile (between 0 and 1).
6. Roll d100.
7. Subtract the result of (5) from the result of (6).
8. If applicable, multiply (7) by the optimal result number for the test, and multiply this by the elapsed time (in the same time unit as the ORN).
9. The result of (8), if applicable, is the outcome of the test (in the units of the ORN/time); otherwise, the outcome of the test is the result of (7) (in raw percentiles).

How to Test an Attribute

1. Determine the attribute which is to be tested.
2. If another attribute or skill is resisting, determine which one(s).
3. Apply any situational modifiers to (1).
4. Apply any situational modifiers to (2), if relevant.
5. Determine the elapsed time, if the test is continuous.
6. Find the appropriate optimal result number for the test.
7. If the test is not resisted and the test is not continuous, perform a standard form test on (3) with an ORN of (6); if the test is continuous, perform a continuous form test on (3) with an ORN of (6) per unit time and an elapsed time of (5).
8. If the test is resisted and the test is not continuous, perform a standard form contest with a first attribute of (3), a second attribute of (4), and an ORN of (6); if the test is continuous, perform a continuous form contest with a first attribute of (3), a second attribute of (4), an ORN of (6) per unit time and an elapsed time of (5).

How to Test a Skill

1. Determine the skill which is to be tested.
2. If another skill or attribute is resisting, determine which one(s).
3. Apply any situational modifiers to (1).
4. Apply any situational modifiers to (2), if relevant.
5. Determine the elapsed time, if the test is continuous.
6. Find the appropriate optimal result number for the test.
7. If the test is not resisted and the test is not continuous, perform a standard form test on (3) with an ORN of (6); if the test is continuous, perform a continuous form test on (3) with an ORN of (6) per unit time and an elapsed time of (5).
8. If the test is resisted and the test is not continuous, perform a standard form contest with a first attribute of (3), a second attribute of (4), and an ORN of (6); if the test is continuous, perform a continuous form contest with a first attribute of (3), a second attribute of (4), an ORN of (6) per unit time and an elapsed time of (5).

How to Create a Random Event

1. Estimate the probability of the event’s occurrence. (See the table below for ideas.)

<i>Probability</i>	<i>Sample Event</i>
0.0000013	Being struck by lightning during a given year
0.0000017	Being killed during a 100 mile car trip
0.000002	Being killed during a 5,000 mile airplane flight
0.00005	Being killed in the next year by a meteor strike
0.00008	Dying of childbirth in the US
0.02	Being burglarized in the next year
0.02778	Rolling “snake eyes” on 2d6
0.16667	Rolling a “6” on a d6
0.4	Being involved in an alcohol related accident in a lifetime
0.5	A fair coin coming up heads
0.5	A fair coin coming up the same way twice in a row
0.66667	Dying from Ebola once infected (in Africa)
0.75	Surviving a lightning strike
0.994	At least two people in a group of 60 having the same birthday

2. Convert the probability into percentile form; if necessary, use multiple rolls (i.e., an event with probability 0.002 would require a roll of “00” and a subsequent roll at or beneath 20 (this is a close, though not exact, approximation)).
3. Make the necessary rolls, and announce the result (or not :-)).

How to Conduct a Fast Action Sequence

1. Declare the initial action count for each player (default is 0).
2. Announce the beginning of the round.
3. Have each player make a standard form INI test with an ORN of 50.
4. For each player, add (3) to 50 (this gives a number between 0 and 100).
5. Have each player add (4) to his or her action count.

6. The player with the highest action count (if tied, highest INI) has his or her last action (if any) resolved.
7. The player in (6) may declare an action (waiting counts as an action) if his or her action count is greater than 0. If his or her action count is at or below 0, go to step 11.
8. Find the base action cost of (7), and divide by that player's ACT macro.
9. Subtract (8) from the player's action count.
10. Go to step 6.
11. Announce the end of the round.
12. If fast action continues, go to step 2.
13. Fast action ends; any actions in progress are resolved.

How to Make an Attack

1. Declare the target (including the specific location, if applicable), and indicate how the attack is being made (i.e., what weapon, how many shots are being fired, etc.).
2. Using the speed factor of the weapon or martial arts form (or 25 otherwise), find the action cost of the attack. Deduct this from the attacker's action count.
3. When the attack resolves, find the attacker's weapon skill (or other skill or attribute, if relevant), and apply to it any modifiers for environmental conditions, weapon bonuses, etc.
4. Make a standard form test of (3), noting the success margin.
5. If the current success margin is 0 or less, go to step 11.
6. Using the target web, compare the required success margin for the desired hit location to the current actual margin; if the actual margin is large enough, then the desired location is struck. Otherwise, follow the web until a permissible location is reached.
7. Multiply the current success margin by the ORN for the attack type; this amount of damage is applied to the first target in the line of sight between the attacker and the hit location.
8. If the object struck in (7) was not the intended target, find out how much damage, if any is transferred to the next object in the LOS. Continue applying damage until none remains to be transferred.
9. For all damaged objects, check to see whether incapacitation (at $DRF(END)*HIT$) has occurred, or whether the object has been scrapped (at HIT).
10. If the weapon or attack form used had multiple "shots", deduct the scatter rating of the weapon from the current success margin and go to step 5.
11. Declare the attack to be complete.

How to Dodge an Attack

1. Declare that a dodge is being attempted, indicating the attack(s) for which this is the case (players may attempt to dodge multiple attacks, with the GM's discretion). Note that, in order to attempt a dodge, the target must be able to act between the declaration of the attack and its resolution; dodges are considered to be standard actions, with a base cost of 25 action counts.
2. When the dodge resolves (hopefully before the attack is resolved!), make a standard form test of the dodge skill (or AGI, target's choice), applying any relevant modifiers.
3. The success margin of (2) is subtracted from the success margins of any attacks being dodged; bear in mind that negative success margins will *improve* enemy attacks.
4. Declare the dodge to be complete.

How to Parry an Attack

1. Declare that a parry is being attempted, indicating the attack for which this is the case (only one attack may be parried at once). Note that, in order to attempt a parry, the target must be able to act between the declaration of the attack and its resolution; parries are considered to be standard actions, with a base action cost equal to the action cost of the attack being parried.

2. When the *attack* is resolved (but before damage is applied), make a standard form test of the appropriate weapon skill (or AGI), applying any relevant modifiers.

3. If the success margin of (2) is greater than 0, the parry is successful, and the object with which the attack is being parried becomes the first object in the attacker's line of sight. Otherwise, damage is allocated normally.

4. Declare the parry to be complete.

How to Train an Attribute

1. Find the prerequisite for the attribute in question. This will be equal to the average of all dependent (linked) attributes of *lower* level (usually there is only one), or 0 if there are no such attributes.

2. Make a standard form contest between the prerequisite and the current attribute level; the ORN is equal to the appropriate number from the attribute advancement table multiplied by the amount of training time.

3. If (2) is positive, add the result to the trained attribute. Otherwise, leave the attribute as it is.

How to Train a Skill

1. Find the prerequisite for the skill in question. This will be indicated in the skill description.

2. Make a standard form contest between the prerequisite and the current skill level; the ORN is equal to the appropriate number from the attribute advancement table multiplied by the amount of training time.

3. If (2) is positive, add the result to the trained skill. Otherwise, leave the skill as it is.

How to Assess Decay

1. Find the prerequisite for the attribute in question. This will be equal to the average of all dependent (linked) attributes of *lower* level (usually there is only one), or 0 if there are no such attributes.

2. Make a standard form contest between the prerequisite and the current attribute level; the ORN is equal to the appropriate number from the attribute advancement table multiplied by the duration of decay.

3. If (2) is *negative*, add the result to the decaying attribute. Otherwise, leave the attribute as it is.

How to Assess Aging

1. For each age-relevant attribute, do the following:

2. Make a continuous form contest between AGE and END with a penalty equal to the time period of the test (this is effectively a standard form contest); the ORN for this test is equal to (AGE-HMA)/HMA and should be assessed in years.

3. *Subtract* (2) from the attribute in question (for young characters, this may result in an increase).

How to Maintain a Character

1. At regular intervals (once a week to once a month of game time), assess decay on attributes and skills.

2. Take note of skill/attribute usage, and be sure to train appropriately.

3. Apply aging annually.

How to Create a Character (Randomized)

1. Determine which character attributes are in use (this will depend on the GM, and on the Reality Guide).

2. Find the highest level attributes in a given category and, for each, roll percentile dice.

3. For each of the above, plug the result into the inverse DRF and write down the corresponding rating.

4. Set the attributes which depend on those in (2) by applying dependencies, or by randomizing where required.

5. Repeat steps 3 and 4 until all attributes have been rated.

How to Create a Character (Character Value Points)

1. Note the permissible CVP range, as defined by the GM.

2. Determine which attributes are being used.

3. Find the highest level attributes in a given category and assign ratings consistent with the character's theme.

4. Set the attributes which depend on those in (3) by applying dependencies, or by assigning ratings where required.

5. Repeat steps 3 and 4 until all attributes have been rated.

6. Identify and assign skills which are relevant to the character concept.

7. Check the value of the character to ensure that it is within the permissible range; if it is not, alter attributes and skills until the character's value meets the guidelines.

8. Flesh out details, such as equipment and the like, which enhance the character concept.

9. Submit the character for GM approval.

How to Create a Character (Mediated)

1. Begin narrating the history of the character.

2. When required by the GM, elaborate or role-play specific events.

3. Based on the results of the narrative, set the appropriate attributes (the GM may elect to do this).

4. Make any final adjustments to attributes, skills, or equipment, and have them approved by the GM.

How to Resolve a Character Action

1. Determine the skill or attribute being tested in conjunction with the action.
2. Add any contextual modifiers to (1).
3. Determine which attributes or skills, if any, are being used to resist the action.
4. Add any contextual modifiers to (3).
5. Determine the optimal result number (or decide to use raw percentages) for the action.
6. If the action is resisted, perform a standard form contest between (2) and (3) with an ORN of (5); otherwise, perform a standard form test of (2) with an ORN of (5).

How to Destroy an Object (Including Characters)

1. If the object has received an amount of damage greater than its HIT attribute, then it has been scrapped. A scrapped object cannot be repaired, nor used for its original purpose.
2. If the object has received an amount of damage less than HIT, but greater than $DRF(END)*HIT$, it has been incapacitated. Such an object will lose some or all functionality (depending on the object); it may be repaired.

How to Conduct a Combat

1. Declare the beginning of combat.
2. Assign initial action counts to players depending on readiness; one “surprise” action is worth 25 act counts, for instance.
3. Begin a standard fast action sequence.
4. When combatants can no longer engage each other, end fast action.
5. Declare the end of combat.

How to Assess Poison Damage

1. Determine the toxin’s current STR and STA.
2. Perform a continuous form contest between the toxin’s STR and the target’s STA (or other attribute, if applicable); the ORN/time should be specified with the poison.
3. Add (2) to the relevant attribute of the target.
4. Perform a continuous form contest between the relevant attribute of the target (i.e.. STA) and the STR of the toxin; the ORN/time is generally 1.
5. If the toxin’s STR is greater than 0, go to step 2.

How to Assess Damage from Disease

1. Determine the disease’s current STR and STA.
2. Perform a continuous form contest between the disease’s STR and the target’s STA (or other attribute, if applicable); the ORN/time should be specified with the disease.
3. Add (2) to the relevant attribute of the target.
4. Perform a continuous form contest between the relevant attribute of the target (i.e.. STA) and the STR of the disease; the ORN/time is generally 1.
5. If the disease’s STR is greater than 0, go to step 2.

How to Heal Damage

1. Make a continuous form END test with the appropriate ORN (found in the section governing healing).
2. Add (2) to the object's HIT attribute.

How to Recover from Stress and Fatigue

1. Perform a continuous form VIM test with the ORN given in the section on stress and fatigue.
2. Perform a continuous form STA test with the ORN given in the section on stress and fatigue.
3. Subtract (1) from the player's stress.
4. Subtract (2) from the player's fatigue.

How to Assess Character Value

1. Add the rating of each specified attribute and skill (unless the GM specifies that certain attributes are to be omitted or inverted).
2. (1) is the character's value assessment.

How to Use the Target Web

1. Find the desired hit location on the target web; note that this location must be permissible given the angle of attack (see chart).
2. If the attack's success margin is greater than or equal to that specified for the location in question, damage is applied to that location (or another object, if in the LOS).
3. Otherwise, follow the appropriate arrow (based on the angle of attack, see chart) to the next hit location in line, then go to step 2.

How to Read the Attribute Distribution Chart

1. Find the attribute of interest, noting the divisions between physical, mental, psycho-social, and sensory attributes.
2. Observe the level of the attribute. Attributes which on other levels which are connected to that attribute (see chart) are said to share *dependencies*.
3. To trace dependencies, use (1) and (2), along with the chart, to find the connected attributes at the appropriate level.

Generic Lists: Items, Materials, and Equipment

These lists give examples of generic items, materials, and equipment for use in campaigns. Reality designers will want to alter and expand these lists to fit the dictates of their own particular game environments.

Quality

Not all items are created equal. Some are better made than others, and are better able to resist deterioration due to damage and the like. To encapsulate this notion, we introduce the idea of object *quality*. Quality is an attribute which affects the use of an item as well as that item's response to damage; in some respects, quality is analogous to END in character objects. As a side note, quality typically affects price as well: high-quality objects are harder to produce, and hence tend to command higher prices.

How Quality Works

Quality rating is added as a standard attribute to equipment stats, usually affecting the skill of using that item and other ratings. The quality rating is, has been noted, generally considered to be the END of an item. Unlike End, however, quality is lowered by damage: as the object's HITs drop, the quality rating drops to maintain the relationship of $DRF(Quality) * HIT = \text{current HITs}$. Repair skills affect the quality rating of an item by adding the success margin /5 to the item's quality. (Of course, if the success roll is negative, then the quality is lowered.)

Quality and Other Attributes

For human-powered weapons (such as swords, pole arms, etc.), $\text{Weapon Dmg} * DRF(STR) = \text{Damage for that character}$. If you prefer not to use this rule then divide all of the damages by 1/2 (the equivalent of a STR 0). $DRF(Quality) * \text{Quality Cost Modifier} = \text{cost}$. Weapon quality effects precision, speed, damage, recoil, and HITs. An object's $HITs = DRF(Quality) * \text{HITs of that type of object}$. Poor quality hand weapons may break and firearms may jam or explode. Armor quality affects DTM, DEM and HITs. Electronics add their quality rating to the user's skill, and quality affects HITs. Poor quality electronics may short circuit, not respond, or shock the user. Vehicle quality affects handling, fuel economy, and speed. Vehicles with poor quality may refuse to start, cut off suddenly, or cause a fire.

Generic Items

All HITs should be multiplied by $DRF(Quality)$ to get the actual HITs of an object (if quality is being used).

Materials

Note that DTMs and HITs are given on a per cm^3 basis. Hence, shooting through 3 cm of fired clay ceramic would require the application of 20 HITs of ballistic damage; the same shot fired at 3 cm of aluminum would transfer 0.02 HITs of damage ($0.1 * 0.1 * 0.1 * 20$) to anything immediately beyond the barrier, and would reduce the barrier itself from 600 to about 586 HITs (assuming, of course, that someone else could hit the same spot on the barrier....).

Material	Attrib	Damage Type											HITs
		B	COR	CR	C	E	M	P	RS	RH	I	T	
Ceramic, Clay	(DTM)	0.0	0.0	0.0	0.0	0.0	1.0	0.01	0.0	1.0	0.0	0.1	20
	(DEM)	3.0	0.01	1.5	0.1	0.0	0.0	0.5	0.01	0.01	0.1	0.1	
Ceramic, Industrial	(DTM)	0.0	0.0	0.0	0.0	0.0	1.0	0.01	0.0	1.0	0.0	0.1	400
	(DEM)	1.5	0.001	1.0	0.1	0.0	0.0	0.5	0.01	0.01	0.1	0.1	
Flesh, Human	(DTM)	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.9	0.0	0.1	50
	(DEM)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Glass	(DTM)	0.0	0.0	0.0	0.0	0.0	1.0	0.5	0.0	1.0	0.0	0.6	75
	(DEM)	5.0	0.0	3.0	0.5	0.0	0.0	0.5	0.01	0.01	0.5	0.2	
Metal, Aluminum	(DTM)	0.1	0.0	0.1	0.1	0.5	0.0	0.1	0.0	0.8	0.1	0.9	200
	(DEM)	0.7	0.25	0.7	0.7	0.01	0.0	0.5	0.01	0.01	0.9	0.2	
Metal, Bronze	(DTM)	0.05	0.0	0.05	0.05	0.2	0.0	0.2	0.0	0.7	0.05	0.8	175
	(DEM)	0.8	0.3	0.8	0.8	0.1	0.0	0.6	0.01	0.01	0.8	0.3	
Metal, Iron	(DTM)	0.01	0.0	0.01	0.01	0.9	0.0	0.01	0.0	0.8	0.01	0.8	250
	(DEM)	0.6	0.6	0.6	0.6	0.1	0.0	0.4	0.01	0.01	0.7	0.1	
Metal, Steel	(DTM)	0.00	0.0	0.01	0.01	0.95	0.0	0.01	0.0	0.85	0.0	0.75	300
	(DEM)	0.5	0.2	0.5	0.5	0.05	0.0	0.3	0.01	0.01	0.5	0.05	
Plastic, Thermoplastic	(DTM)	0.2	0.0	0.2	0.2	0.0	1.0	0.3	0.0	1.0	0.2	0.7	120
	(DEM)	0.8	1.0	0.8	0.9	0.01	0.0	1.0	0.01	0.01	0.8	0.7	
Plastic, Thermoset	(DTM)	0.15	0.0	0.15	0.15	0.0	1.0	0.25	0.0	1.0	0.15	0.6	175
	(DEM)	0.8	1.0	0.7	0.8	0.01	0.0	1.0	0.01	0.01	0.7	0.6	
Wood	(DTM)	0.0	0.0	0.1	0.0	0.1	0.5	0.2	0.0	0.9	0.0	0.3	100
	(DEM)	0.8	1.0	0.5	0.8	0.1	0.8	1.0	0.02	0.02	0.8	0.8	

Weapons

For hand weapons, range is given in terms of a character's reach (R), usually 1 meter. Speed is the base action cost associated with using the weapon. Prec is *precision*, a bonus added to the skill rating when using the weapon.

Name		Dam. Type	Range	Speed	Prec	Damage
Knife (4" blade)		C/S	R	25*	+15	200/80
	<i>Typical folding knife or small utility sheath knife</i>					
Knife(8" blade)		C/S	R	25*	+10/15	240/100
	<i>Typical hunting or military issue sheath knife</i>					
Knife (12" blade)		C/S	R	25*	+5/10	240/160
	<i>Large combat knife or dagger</i>					
Sword (short)		CS	R+.5	25*	+5/10	300/200
	<i>Short bladed sword or machete</i>					
Sword (long)		C/S	R+1	50*	0/+5	440/360
	<i>Long bladed sword</i>					
Sword (2-handed)		C/S	R+2	100	1200	
Spear (hunting)		S	R+2	50	+5	240
	<i>Short spear shaft balanced for throwing with barbed points</i>					
Spear (military)		S	R+3	50		300
	<i>Long shafted spear with long, unbarded point</i>					

Name		Dam. Type	Range	Speed	Prec	Damage
Glaive		C	R+3	100		1100
	<i>Polearm consisting of a large blade on an 8ft shaft</i>					
Axe (wood)		C	R+1	75		800
	<i>Basic axe used for cutting wood</i>					
Axe (combat)		C	R+1	50		1200
	<i>Axe designed with a large blade for combat, requires 2 hands</i>					
Hammer (lt.)		Cr	R	30	+5	120
	<i>Utility Hammer</i>					
Hammer (Hv)		Cr	R+1	50		200
	<i>War Hammer</i>					
Mace		Cr	R+.5	75		250
	<i>Blunt club with a steel head</i>					
Maul		Cr	R+1	100		1000
	<i>Mace with a long shaft, wielded with 2 hands</i>					
Staff (short)		Cr	R+1	50	+5	80
	<i>3' to 5' staff</i>					
Staff (long)		Cr	R+2	75		120
	<i>5' to 8' staff</i>					
Staff (Hv.)		Cr	R+2	75		100
	<i>Medium length of staff with extra thick shaft</i>					
Baton (wood)		Cr	R+.5	25*	+10	30
	<i>Old style police baton or Escrima stick</i>					
Baton (metal)		Cr	R+.5	25*	+10	60
	<i>Modern police baton or Large flashlight</i>					
Baton (fiberglass)		Cr.	R+.5	25*	+10	50
	<i>Modern police baton, lighter than metal</i>					

*Drawing the weapon from a sheath has a base cost of 50 action counts.

Some notes regarding ranged weapons: For all bows the damage type refers to different types of arrows used. The STR is the strength rating of the bow, not the user; the user cannot draw the bow if his STR rating is less than the bow's. A crossbow of higher STR, however, can be reloaded if a cocking device is used. (This is typical of heavy crossbows.)

Name		Dam. Type	Max Range	Speed	Prec	Damage
Bow (long)		Cr/S	DRF(STR)*4	25	+10	200/400
	<i>Wooden bow of about 6 ft in length, reloading the bow is speed 100</i>					
Bow (short)		Cr/S	DRF(STR)*3	25	+10	180/350
	<i>Wooden bow of about 4-5 ft in length, reloading the bow is speed 100</i>					
Crossbow (light)		Cr/S	DRF(STR)*2	25	+15	180/350
	<i>Small crossbow that can be fired with one hand, reloading is speed 100</i>					
Crossbow (heavy)		Cr/S	DRF(STR)*3	25	+20	300/500
	<i>Large crossbow that must be wielded with 2 hands, reloading is speed 200</i>					
Compound bow		Cr/S	DRF(STR)*4	25	+15	400/800
Knife (thrown)		S	DRF(STR)*1	25		200
	<i>Small knife balanced for throwing</i>					

Name		Dam. Type	Max Range	Speed	Prec	Damage
Spear (hunting)		S	DRF(STR)*2	50	+5	240
<i>Short spear shaft balanced for throwing with barbed points</i>						
Spear (military)		S	DRF(STR)*1	50		300
<i>Long shafted spear with long, unbarded point</i>						
Shuriken		S	DRF(STR)*1	25	+10	200
<i>Star-shaped throwing weapons</i>						

Notes regarding firearms: All cause ballistic damage. Base firing speed is 25, cocking is speed 25 (where applicable), and reloading is 50 for clip-loading weapons (100 for other weapons). The damage given is based on standard ammunition, and could vary if the ammo type is changed. Recoil for guns is equivalent to the *scatter rating*, and should be used accordingly.

Note on weapon type: sa indicates semiautomatic; auto indicates fully automatic; ss indicates single shot; p indicates that the weapon is a pistol or handgun; r indicates that the weapon is a rifle or long gun; and h indicates a heavy weapon.

Name	Type	Ammo	Max Range	Prec	Recoil	Wt	Damage
9mm Beretta	sa-p	15	1850ft	+20	-2	2.5	400
IMI Eagle .44	sa-p	9	2500ft	+20	-5	4.5	450
Ruger .22	sa-p	9	1200	+15	-2	2.5	300
Walther .32	sa-p	7	1460	+15	-2	1.5	300
Smith & Wesson .44	sa-p	6	2500	+20	-5	3.5	450
Colt .357	sa-p	6	2025	+20	-5	3	450
Remington (12g)	sa-r	5	150	+5(15)	-10	8	400 (1000)
Ak 47 7.62mm	auto-r	30	3000	+20	-5	10.5	450
H & K G3 .308	auto-r	20	4650	+20	-3	11	500
M16 .223	auto-r	20	3850	+20	-3	8	400
H & K psg1	sa-r	12	4650	+30	-5	11	500
Remington .30-06	ss-r	1	4800	+30	-5	7.5	500
UZI 9mm	auto-p	32	1900	+15	-7	9.5	300
H & K MP5 9mm	auto-p	30	1900	+15	-7	7.5	300
Machine gun .50	auto-h	100	2500	+15	-15	17	5000

Armor

For additional DTM/DEM information, consult the materials from which the armor is made. Like other attributes, these properties may be inherited.

Type	DTM (by dmg type)					DEM (by dmg type)					HITs
	CR	C	I	T	B	CR	C	I	T	B	
Cloth armor	0.95	0.85	0.95	0.85	0.95	0.2	0.9	0.3	1.2	0.2	500
Padded cloth	0.85	0.75	0.9	0.7	0.9	0.2	0.9	0.3	1.2	0.2	750
Leather, Lt.	0.9	0.7	0.8	0.65	0.85	0.2	0.6	0.5	0.2	0.6	1000
Leather, Hv.	0.7	0.65	0.7	0.65	0.8	0.6	0.4	0.6	0.2	0.7	2000
Chain mail	0.8	0.6	0.75	0.7	0.8	0.3	0.2	0.3	0.3	0.5	5000

Type	DTM (by dmg type)					DEM (by dmg type)					HITs
	CR	C	I	T	B	CR	C	I	T	B	
Wooden plate	0.55	0.6	0.7	0.7	0.75	1.2	0.8	0.9	1.5	1.2	2000
Scale mail	0.6	0.5	0.65	0.65	0.75	0.2	0.3	0.4	0.3	0.8	4000
Plate mail	0.4	0.35	0.5	0.6	0.6	0.3	0.2	0.4	0.2	0.5	7000
Full plate	0.3	0.25	0.35	0.65	0.6	0.2	0.1	0.3	0.1	0.4	9000
Police vest	0.85	0.8	0.9	0.7	0.5	0.3	0.8	0.6	0.9	0.4	8000
Flak jacket	0.8	0.7	0.8	0.65	0.5	0.1	0.3	0.3	0.7	0.3	10000
Military helmet	0.5	0.5	0.55	0.7	0.6	0.1	0.3	0.3	0.1	0.3	1000
High tech. plate	0.3	0.25	0.35	0.4	0.4	0.7	0.1	0.4	0	0.2	12000

Equipment

All costs are in terms of 1995 American dollars. Obviously, this will make the costs as given inappropriate for some campaigns. In such cases, either use these prices as rough guidelines or else make up new ones...keep in mind that cultural factors (such as median technology level, median wealth, and stratification) will affect both availability and price.

Clothing	Size	Weight	Cost
leather gloves		0.5	25
knit gloves		0.4	12
canvas jacket		2	75
leather coat (long)		5	200
leather coat (short)		4.5	180
leather coat (3/4 length)		3.5	180
wool coat (long)		4	180
poncho		1.1	40
ski jacket(w)		3.5	100
ski jacket(m)		2.5	80
leather boots(w)		(short)1.5 (long) 3.5	55
rubber boots(w)		2	35
rubber boots (m cold-0*)		5	60
nylon boots(m cold -100*)		6	125
felt hat		0.7	30
handbag/purse	7x4x1.25	0.7	33

Survival Gear	Size	Weight	Cost
air mattress (twin)	38x75	6.1	32
hand pump		2.3	25
Backpack(internal frame)	2200cu in.	2.6	35
Sleeping bag		8.6	50
Tent (cabin style, 4 person)	9'x9'	17	130
Cot	76x25x8	15	40
Kayak (inflatable 400lbs)	10'-7"x2'-8"x10"	30	200
Binoculars (view width 260ft at 100yd)		1	80

Survival Gear	Size	Weight	Cost
Water filter (2 gal, lead, chlor, bacteria)	7.5x7.5x9	4.9	35

Electronics	Size	Weight	Cost
air filter (320 sq ft)	16x12dia	18	200
electric shaver(w)		1	50
personal CD player	5.25x6x1.25	2.2	160
personal cassette player	4.5x1.75x3.75	1	60
TV/cassette/stereo (5in screen)	8.5x7.5x10.25	8	100
CD/dual cassette/stereo	24.5x8.75x10.75	22	180
5CD/dual cassette/stereo	11x10.75x13.87	29	260
(speakers for above)	7.87x6.75x13.87		
personal recorder (voice act)	2.75x1x4.75	1.2	50
personal recorder (digital, voice)	card sized	0.4	40
Personal organizer	5.25x3x.75	0.9	160
TV/VCR (25" screen 2heads)	24.5x20.5x23	81	600
TV/VCR (13" screen 2 heads)	15.5x15.5x16.5	50	455
Camcorder (small)	4.75x5.25x4.5	5.7	660
Camcorder (8mm)	4.5x8.5x4.5	4.9	800
S-Nintendo(16 bit)		4.6	115
Sega Saturn (32 bit)		7	420
Child's portable computer (128k)		4.3	150
Pager	3x.5x2		100
Phone		1.9	30
Radio (portable 2-way)	2.5x2x6.5	1.8	125
Radio (scanner)	9.5x7.25x2.5	3.3	200
Blood pressure monitor		1.3	40

Furniture	Size	Weight	Cost
wheelchair (folds)	24.25x30.38x36	46	330
folding screen(3 panels)	(17.5)51x1x71	21	100
folding screen (4 panels)	(17)70x.87x71	24	130
Dog shelter(100lb dogs)	28.5x37x27.33	35	80
Dog crate (portable, 95 lb dogs)	42x26x30	40	150
inline skates(nylon-fiberglass 76mm)		8.5	100

Vehicles

Type	Passengers	Mileage	Cruising Speed	Max Speed
Economy car	4	40-50	65	100
Luxury car	6	20-30	85	150
Sports car	2-4	15-25	100	200
Truck (small)	2	25-35	65	100
Truck (large)	3-6	15-25	85	120

Generic Lists: Modifiers

As has been noted elsewhere, tests in AR are modified by various environmental conditions. While an infinite number of these modifiers are possible, a reasonably short list will suffice to cover most circumstances encountered in play. GMs are encouraged to produce lists of their own, and to make up new modifiers as needed to maintain realism.

Situation	Modifier
Actor moves (covers <50% of action range)	-5
Actor moves (covers 50%<movement<100% of action range)	-25
Actor moves (covers >100% of action range)	-50
Actor is attempting to specialize or generalize a skill	-15
Fatigue or system trauma	Fatigue/4
Moderate distractions (unnecessary sense)	-5
Substantial distractions (unnecessary sense)	-10
Must use an unfamiliar type of item	-50
Must use an unfamiliar item (of a familiar type)	-10
Must use a familiar item	0
Must an extremely familiar item	+10
Necessary sense is slightly obscured	-10
Necessary sense is moderately obscured	-30
Necessary sense is significantly obscured	-50
Necessary sense is fully obscured	-100
Pain or Stress	Stress/4
Skill is "Very Easy"	+10
Skill is "Easy"	0
Skill is "Moderate"	-10
Skill is "Hard"	-20
Skill is "Very Hard"	-30
Target is moving (covers <50% of action range)	-10
Target is moving (covers 50%<movement<100% of action range)	-50
Target is moving (covers >100% of action range)	-100
Using "off" hand	Rating becomes rating*DRF(HND)

Some notes on the above list: A "necessary sense" is one which is used directly in the execution of the task at hand; an "unnecessary sense," then, is one which is not. The range of an action is, literally, the maximum physical distance between the actor and the target which will allow a task to be performed. For hand weapons, most non-weapon skills, and many attribute checks, this is equal to one's reach. For ranged weapons, this is equal to the weapon's maximum range. As has been noted elsewhere, penalties to stress and fatigue apply to *all* tests, and are listed here for convenience (as are the modifiers for skill difficulty).

Generic Lists: Skills

This is a fairly standard list of skills; all skills are here listed alphabetically by lineage (general to specific). Depending on the level of detail in the game, the GM may require general or more specialized skills. Generally, however, players are encouraged to choose specialized skills. These skills more specifically describe the character, and are typically more realistic in most game settings. Another advantage of specialized skills is that they give characters more in depth training in a particular skill set. Characters with specialized skills can solve more specific and obscure problems without much difficulty; a character trying to answer a specific problem using a general skill, by contrast, operates at a penalty. Typically, the penalty for using a general skill for a subskill purpose (or vice versa) is -15, but the GM may make exceptions if warranted. Naturally, it goes without saying that this list is a brief one, and that skills can be specialized even further. In such cases, the same modifier for generalization/specification applies.

As has been noted previously, each skill has a prerequisite. Typically, these are other skills or attributes which may be used as defaults (and are involved in skill training). If a listed attribute is not used in a particular reality, then the parent attribute of one level lower should be used. If the listed prerequisite has two or more ratings connected by a plus (+) sign, then *average* these ratings to get the prerequisite rating. If a prerequisite contains a reference to cultural knowledge, then the GM will provide the rating for an average person of that culture. The GM will provide a relevant prerequisite if none of those listed is appropriate, or else assume a prerequisite of 0.

In cases where there are multiple prerequisites (cojoined by “or”), players may choose between them. GMs, however, may place restrictions on this practice where appropriate.

Skill List (difficulty, prerequisite)

Acting (H, VRB+ PRS)

The ability to convince others that you are someone else. When trying to imitate a specific person, the difficulty of the task will be increased. Specializations include Con Artist, Performance, Disguise, Mimicry, and Intimidation.

Con Artist (H, SYM +PRS or SYM +VRB)

This skill includes tactics to swindle money from others, but does not train you to imitate a specific person, only a type of person.

Performance (H, VRB +PRS)

The skill of theater and film acting and training in backstage work such as directing and stage managing.

Disguise (H, Art or Performance +Art)

The ability to make yourself look like another person.

Mimicry (H, VRB)

Skill in copying sounds that you have heard.

Intimidation (M, SIZ-10 +PRS)

The ability to cause others to be afraid of or impressed by you.

Administration (M, Sociology or INT)

The ability to organize and lead a group of people. This skill allows you to create and run a large company or group of soldiers. Specializations include Bureaucracy, Leadership, and Material management.

Bureaucracy (M, PRS or SYM +Etiquette)

How to act in a large complex governing body, including knowledge of rules of order, standard procedures, etc.

Leadership (E, PRS or PRS +Psychology)

The ability to convince others to follow your orders.

Material management (E, QNT +Teamster-10 or QNT-15)

The ability to manage long and complex supply lines in military, exploration, or trade situations.

Agriculture (M, MEM +SYM)

The ability to raise animals and plants for market. Specializations include Animal handling, Horticulture, Pest control, and Soil science.

Animal handling (M, PRS or SYM+ Animal behavior)

The care and handling of animals. See Animal handling below.

Horticulture (E, MEM or Botany)

The care and growing of plants.

Pest control (M, MEM-15 or Zoology-10)

The ability to keep pests down to a manageable level by using chemicals, natural predators, and other farming practices.

Soil science (M, MEM-15 or Horticulture-5)

Knowledge of soil nutrients that are required to grow plants, habits and types of parasites and plant diseases, etc.

Animal handling (M, PRS-10 or SYM +Animal behavior)

The care and training of animals. Specializations include Animal riding, Animal training, and Veterinary medicine.

Animal riding (E, SYM +AGI or AGI +Animal handling)

Skill in controlling and staying on a moving animal,

Animal training (H, PRS or Animal behavior)

The ability to make animals do "tricks" and follow commands.

Teamster (E, Animal handling-10 or QNT-10+ Drive heavy{for cultures that use trucks instead of animals})

Skill in transporting goods by wagon or heavy truck.

Veterinary medicine (H, SYM-10 or Animal handling-10 or Medicine-10)

The ability to heal injuries and cure animal diseases.

Armory (M, DEX-15 or Metalworking or Woodworking-10)

The skill of making weapons and armor. The quality rating is equal to the success result/5. Specializations include Armor, Weaponsmithing, and Fetching.

Armor (M, Metalworking or Sewing)

The skill of making protective clothing for fighting.

Weaponsmithing (M, Metalworking-15 or Woodworking-15 or Metalworking +Weapon skill)

The ability to make hand weapons.

Fletching (M, Woodworking-15)

The proper making of bows and arrows used in archery.

Art (M, DEX or PRC)

The ability to make beautiful and expressive works of art. Specializations include Sculpture, Painting, and Drawing.

Sculpture (M, DEX +SPL)

Creating 3dimensional objects.

Painting (M, DEX +Drawing or DEX + SIT)

The ability to use colored liquids or powders on 2D or 3D objects.

Drawing (E, DEX +SIT)

The ability to use lines in 2D art.

Archery (M, DEX)

The ability to fire a bow weapon. These weapons are made to shoot arrows, bolts, or pellets. Specializations include Crossbow, Hand crossbow, Recurve bow, and Compound bow.

Crossbow (E, DEX-10 or DEX +Recurve bow or Rifle)

Skill in light and heavy crossbows.

Hand crossbow (E, DEX-10 or Crossbow or Pistol)

The use of one-handed crossbows.

Recurve bow (M, DEX)

Skill in long bows and short bows.

Compound bow (M, DEX)

The skill of using bows with a pulley system to add strength.

Athletics (M, STR +AGI)

Skill in athletic games. Specializations include Team sports, Gymnastics, Swimming, Running, Track and field, and Climbing. Athletic skills may be further specialized into individual sports.

Team sports (M, AGI)

Sports such as football, basketball, volleyball, and lacrosse.

Gymnastics (H, AGI +STR)

Skill in tumbling, parallel bars, rings, balance, act.

Swimming (E, END)

Skill in swimming strokes, diving, and water games.

SCUBA (M, END +Swimming)

The ability to use an air tank and other related equipment to swim at greater depths.

Running (E, END or AGI)

The ability to run short or long distances.

Track and field (M, STR)

Skill in contests of jumping, vaulting or throwing. These throws are for distance not accuracy, but this skill would be accompanied by a minor skill in throwing that object as a weapon.

Climbing (M, STR+ SPL)

Skill in climbing with or without tools. This skill allows a character to climb a wall, tree, or mountain. The climber can also set up spikes and ropes to prevent himself/herself from falling and to assist others. No skill test is needed to climb stairs or ladders or jumping to conclusions.

Axe/mace (M, AGI)

Skill in using a hand weapon with a long shaft and a heavy head. Specializations include Mace, Hatchet, Two-handed axe, and Polearm.

Mace (M, AGI or AGI +Sword)

Skill in using a medium sized axe, wood-cutting axe, mace, pick, or hammer.

These weapons are sized to be used with one hand.

Hatchet (E, DEX)

Use of a small hatchet, hammer, or blackjack.

Two-handed axe (M, STR +AGI or Polearm)

Skill in using a large axe, maul, or warhammer. These weapons are so large that they must be wielded with two hands.

Polearm (M, AGI +STR or Two-handed axe or Spear)

Skill in using bladed weapons with a long shaft such as glaives, halberds, naginata, and pikes.

Business (M, QNT or Economics +Administration)

The ability to operate a business. Specializations include Bargain, Accounting, and Industrial practices.

Bargain (H, PRS +SYM or PRS +Economics)

The skill of getting the best price in a sale or trade.

Accounting (M, QNT)

Skill in managing the money of a business.

Industrial practices (M, MEM or Mechanics or other skill related to the industry)

Knowledge of the processes that are used to produce a product. Examples of industrial practices include, mining, oil refining, plastic molding, and metal forging. A character with this skill should choose one industry in which his or her knowledge lies.

Beam weapons (E, DEX-5 or DEX+ Rifle or DEX+ Pistol)

The ability to use an energy weapon. These weapons include lasers, particle beams, plasma weapons, ion guns, etc. Specializations include Beam pistol, Beam rifle, and Heavy beam.

Beam pistol (E, DEX-5 or Pistol)

Using one handed energy projectors.

Beam rifle (E, DEX-5 or Rifle)

Skill in two-handed energy weapons.

Heavy beam (M, DEX-10 or Heavy)

Skill in large energy weapons.

Biology (E, MEM-15 or Science-10 or Botany +Zoology)

The study of living things and their interactions. Specializations include Animal behavior, Botany, Genetics, Microbiology, Zoology, Paleontology, and Xenology.

Animal behavior (H, EMP-20 or SYM-10 or Animal handling or EMP +Zoology)

The study of the patterns and causes of the behavior and interactions of animals.

Botany (M, MEM-10 or Horticulture)

The study of the types and physiology of plants.

Genetics (M, MEM -20 or Zoology-10 or Botany-10)

Knowledge of the patterns of inheritance, evolution, and DNA.

Microbiology (H, MEM-20 or Zoology)

The study of tiny plants and animals such as bacteria, viruses, fungi, and plankton.

Zoology (M, Animal handling or MEM)

Knowledge of the types and physiology of animals.

Paleontology (M, (SPL +MEM)-10 or Archaeology +Zoology)

The study of extinct, ancient, plants and animals.

Xenology (H, Astronomy-10 +Zoology)

The study of possible live forms on other planets. In a culture that has made alien contact, then this skill includes the behavior and physiology of the aliens.

Boat (E, AGI-10 or AGI+ Navigation)

The ability to pilot a water craft. Specializations include Sailing, Large boats, and Speedboat.

Sailing (H, AGI-15 or Fluids +Speedboat)

Piloting wind powered boats.

Large boats (M, DEX-15 +Navigation or DEX +Speedboat)

Piloting naval ships and cargo ships.

Speedboat (M, AGI-10 or AGI-15 +Large boat)

Piloting small, fast powerboats.

Chemistry (M, QNT-10 or Mathematics+ Science)

Knowledge of the structure and behavior of materials. Specializations include Biochemistry, Polymers, Materials.

Biochemistry (H, MEM-20 or Physiology-5)

The study of chemicals found in living organisms and the chemical processes that make life possible.

Polymers (H, MEM-20 or Materials or QNT +Biochemistry-10)

The science of plastics.

Materials (M, MEM-10 or QNT +Industrial practices)

Knowledge of the chemical properties of materials commonly used in manufacturing.

Computer operation (M, Electronics op. or Computer prog.)

The ability to use a computer. Specializations include Computer use, Computer languages, and Computer programming.

Computer use (E, MEM-10 or Computer programming or Electronics-10)

The ability to use computer programs and platforms such as DOS, UNIX, or Macintosh.

Computer languages (M, QNT-15 +VRB or VRB+ Computer prog.)

The codes and languages that are used to program a computer. In some cultures it may even be a language spoken by computers.

Computer programming (H, Computer op. +Computer lang. or QNT +VRB)

The skill of creating and editing programs.

Construction (M, SPL-10 +DEX or Engineering-15)

The ability to build things such as buildings and furniture. Specializations include Plumbing, Carpentry, Electrical systems, and Heating.

Plumbing (M, SPL-20 or Engineering-5 or Fluids-10)

Construction or repair of water, chemical, and gas delivery systems. Examples include household piping, compressed air and hydraulic lines.

Carpentry (M, DEX +SPL or DEX+ Engineering)

The ability to build structures out of wood metal and other materials.

Electrical systems (M, SPL-15 or Circuits)

Knowledge of how to properly supply electricity to a building.

Heating (M, SPL-10 +PRC or Fluids-10)

The ability to install and evaluate heating and cooling systems.

Cooking (E, QNT-10 or TST-10 or Chemistry-10)

The skill of preparing food. The success margin determines how good the food tastes. Specializations include Baking, Boiling, Frying, Grilling, and Nutrition.

Baking (M, QNT or SML-5)

The skill of baking bread, pastries and meats.

Boiling (E, TST-5)

The skill of cooking sauces, pasta and meats.

Frying (M, QNT +SIT)

Skill in cooking foods on an open pan or pot of oil.

Grilling (E, SML +SIT or Baking)

Skill in cooking meats and other foods on a slotted surface over an open flame.

Nutrition (M, Cultural knowledge or Physiology)

Knowledge of which foods contain which nutrients, and how to arrange a well-balanced meal.

Craftsmanship (M, DEX +PRC or Art +Construction)

Skill in constructing household objects. Objects made using this skill are not fine art and not large enough to be structures. Specializations include metalworking, Woodworking, Sewing, and Rope use.

Metalworking (M, DEX-15 or Construction or Mechanics)

The art of creating objects from metals. This skill includes bending, cutting, heating, and (depending on the culture) blacksmithing and welding.

Rope use (E, DEX or Sailing or DEX+ Survival)

Knowledge of knots and skill in tying objects securely.

Sewing (M, DEX)

The ability to make clothing from raw material.

Woodworking (M, PRC-15 +DEX or Carpentry +Art)

Skill in making furniture, tools and other household objects out of wood.

Dance (M, AGI+ PUL-15 or AGI+ Art)

The ability to dance beautifully. A failed skill test means that the character looked clumsy or performed the wrong step. Specializations include Social Dance, Performance dance, and Club dancing.

Social dance (M, AGI +MEM or AGI +Etiquette)

Performing programmed dances that are used as social games.

Performance dancing (H, AGI -10 or AGI +Art)

Dancing and choreographing "modern dance" or artistically expressive dances.

Club dancing (M, AGI +PUL)

The ability to "shake your booty" in a night club setting. These dances are almost never choreographed and are therefore, improvisational.

Demolitions (H, QNT +SPL-15 or Chemistry +Engineering)

The skill of blowing up things; destroying objects with explosives. This skill includes evaluating the structure of the target, measuring the amount of explosive to use, and making the object explode in a certain direction. Specializations include improvised munitions, underwater demolitions, and demolitions disposal.

Improvised munitions (M, MEM-25 or Chemistry-10)

Making explosives out of everyday items.

Underwater demolitions (H, Chemistry-10 or Engineering +SCUBA)

Planting explosives under water.

Demolitions disposal (VH, SPL+TCH+SIT-15 or Demolitions-10)

Skill in defusing and deactivating explosives

Design (H, SPL-10 +MEM-15 or Art)

The ability to create (but not always build) well made objects. Well designed objects are easy to use, fit in well with their surroundings, and are visually pleasing. Specializations include Architecture, Graphic design, Industrial design, Landscape, and Fashion.

Architecture (H, SPL +MEM or Art+ Construction)

The skill of designing buildings. This includes structure, mechanical systems, traffic patterns, and beauty.

Graphic design (M, SPL-10 +VRB or Art +Language)

Designing eye-catching, informative, 2-D images including signs, logos, advertisements, and labels.

Industrial design (H, SPL +MEM-10 or Art +Engineering)

Designing objects such as tools, furniture, appliances, and vehicles. These designs emphasize visual appeal, ease of use, economical manufacturing, and use by non-standard people (handicapped, short, tall, etc.).

Landscape (M, SPL +MEM-10 or Art +Horticulture)

The ability to create a pleasing outdoor environment in the case of gardens, parks and around buildings. This includes some knowledge of city planning.

Fashion (M, PRC +Sewing or Art +PRC)

Designing clothes.

Drive (E, AGI +SPL)

The ability to pilot a ground vehicle. Specializations include Car, Drive heavy, Bike, Construction equipment, Military vehicles, Trains, and Hovercraft.

Car (E, AGI +SPL-10 or Drive heavy-5)

The operation of a medium sized, four-wheeled vehicle.

Drive heavy (M, AGI+ SPL-10or Car-5)

Driving a large truck or similar vehicle with more than four wheels.

Motorcycle (M, AGI-10+ SPL-10 or Car-20)

Driving small, two or three wheeled motor vehicles.

Construction equipment (M, DEX +SPL-10)

Operation of cranes, forklifts, backhoes, etc. These vehicles do not move much, but require skill in the use of their controls.

Military vehicles (M, AGI +SPL-10 or Drive heavy-15)

Skill in driving large armored vehicles such as tanks and APCs.

Trains (E, SPL-10 or Drive-10)

The ability to operate a vehicle that rides on rails.

Hovercraft (M, AGI-10 +SPL-10 or Car +Pilot+10)

Skill in piloting a vehicle that rides on a cushion of air.

Electronics (M, MEM-15 or Circuits or Electrical Eng.)

Knowledge of electrical equipment. Specializations include Simple electronics, Technical electronics, and Electronics repair.

Simple electronics (E, MEM)

Use of items such as a TV, radio, and video equipment found in homes.

Technical electronics (M, Simple electronics-10 or related technical skill)

The operation of medical, scientific, or military electronic.

Electronics repair (M, SIT-15 or Circuits-10)

The ability to build and repair electronic devices.

Engineering (H, Calculus +Science-10)

The ability to create (but not to build) objects that perform up to strict standards. Specializations include Electrical eng., Mechanical eng. Civil eng., and Chemical eng.

Electrical eng.(H, Circuits-15)

Designing electronic devices.

Mechanical eng. (H, SPL-15 +Calculus or Mechanics-15)

Designing machines, engines, and aircraft.

Civil engineering (H, QNT-10 +SPL-15 or Construction-15)

The ability to design structures, bridges, roads, and reservoirs.

Chemical engineering (H, Calculus +Chemistry-15)

The ability to create materials for specific applications.

Etiquette (M, SYM-10+ PRS or PRS+ Sociology)

The ability to act properly in a complex social situation. Specializations are based on the situation. Examples are Bureaucracy, High School, Netiquette, Royal court, Seduction, Streetwise.

Royal court (M, Politics-10 +PRS)

Knowing how to act in the high ranks of a monarchy.

High school. (M, PRS-15 +PUL)

Establishing power in an image conscious, teenage setting.

Bureaucracy (M, PRS-5 or SYM +MEM-10)

How to act in a large complex governing body.

Netiquette (E, MEM-5 or Streetwise-15)

The knowledge of proper behavior while communicating on the Internet.

Seduction (H, PUL-10 or Acting-5)

The ability to use sexual suggestions to get favors from others.

Streetwise (H, PRS or Sociology-10)

The ability to blend into a street setting. This includes the ability to get information on the street and recognize street gangs.

Firearms (M, DEX-5 or Beam weapons)

The skill of firing an explosively powered, ballistic projectile weapon. Rail guns and similar weapons are included in this skill because of their recoil. Skill in cleaning the weapon is included in this skill. Specializations include Rifle, Pistol, and Heavy weapons.

Rifle (E, DEX-10 or Pistol-5)

Use of long firearms that are held in 2 hands. Shotguns are included in this category.

Pistol (E, DEX-10 or Rifle-5)

The use of small firearms.

Heavy weapons (M, DEX-15 or Rifle-10)

Skill in large, explosive projectiles, such as grenade launchers, missile launchers, and LAWs.

Flails (M, AGI-10 or AGI+ Axe/mace-5)

Skill in the use of flexible weapons. Specializations include Morningstar, Two-handed flail, Chain weapons, and Whip.

Morningstar (M, AGI-10 or Axe/mace-5)

The use of one-handed flails including nunchuncka and ball-and-chain.

Two-handed flail (M, STR +AGI-10 or Morning Star-5)

Includes large flails and three section staves.

Chain weapons (M, AGI + Whip-5)

Includes flails made of many links, chains, or weighted ropes. These weapons can be used to strike or entangle an opponent.

Whip (M, AGI-10 or Chain weapons-5)

Is the use of light flexible weapons such as leather whips or ropes. These weapons cause extra damage if "cracked".

Geology (M, MEM-10 or Science or Chemistry-15)

Knowledge of rocks and minerals. This skill can be used to locate valuable minerals and set up a mine.

Soils (M, INT-15 or Soil science or Construction-10 or Civil Engineering-10)

Knowledge of the physical properties of soils. This information is particularly useful in construction situations.

Volcanology (M, Metalworking +Chemistry or Chemistry-10)

The study of volcanoes, earthquakes, and continental drift.

Minerals (M, Vulcanology-5 or Chemistry-10)

Knowledge of the processes that form commercially desirable raw materials.

Gunnery (M, SPL-10 or DEX-15 +Weapon systems-10)

The skill of using large indirect fire weapons. These weapons are aimed by gears, motors or other similar means. With this skill, a character can even hit unseen targets if it is identified on a map or a forward observer is used.

Energy weapons (M, DEX +Electronics)

The ability to aim heavy energy weapons.

Ballistic weapons (M, SPL-15 or Heavy weapons-10)

Skill in firing heavy ballistic guns, such as naval guns, howitzers, and rail guns.

Missiles (M, DEX-10)

Skill in firing self-propelled explosive projectiles.

Orbital artillery (H, SPL-15 +Geography or Energy weapons +Geography)

The ability to aim large weapons mounted on satellites, directed at the planet below.

History (H, MEM-15 or Sociology-10)

The study of past event and peoples. Specialization includes Archaeology, Anthropology, an Cultures.

Archaeology (H, SPL-15 Soils-20 or Paleontology-10)

Skill in digging and interpreting artifacts left from past civilizations

Anthropology (H, MEM-15 or Physiology-15 or Paleontology-5)

Skill in human life before the age of written history.

Cultures (H, MEM-15 or Archaeology +Sociology-10)

Knowledge of the people, practices, and events of a specific culture, specified by a geographic area and time.

Hunting (E, PRC-15 or Animal behavior+ Tracking)

Skill in capturing animals for food. Specializations include Bird hunting, Fishing, Large game, Traps, and Tracking.

Bird hunting (E, PRC-10 +Weapon skill)

The ability to catch flying animals.

Fishing (E, MEM +DEX or DEX +Animal behavior)

Skill in catching swimming animals.

Large game (M, Tracking +Weapon skill)

Skill in catching land animals.

Traps (M, MEM-15 or Animal behavior +Mechanics)

The ability to set up and disarm traps.

Tracking (M, PRC or PRC +Navigation)

The ability to follow a trail left by something passing through an area.

Knife (E, DEX or Fencing)

Skill in using a short bladed edged weapon.

Language (Varies, VRB)

Skill in specific languages.

Mathematics (H, QNT)

The skill of processes used in numerical calculations. Specializations include Calculus, Algebra, Geometry, and Arithmetic.

Algebra (M, QNT +Arithmetic)

Skill in performing calculations involving unknown variables. This skill also include trigonometry and graphing functions.

Arithmetic (E, QNT)

The ability to perform simple calculations of addition, subtraction, multiplication.

Calculus (H, QNT +Algebra)

The ability to perform complex calculations involving rates of change.

Geometry (M, SPL +QNT or SPL +Arithmetic)

Knowledge of the mathematical relationships of 2D and 3D objects. division on integers and fractions.

Mechanics (M, MEM+ PRC or PRC+ Engineering)

The ability to build and repair mechanical devices from existing parts. Specialization include Aircraft mechanics, Auto Mechanics, Micro-mechanics, Firearms repair, and Weapon systems.

Aircraft mechanics (H, MEM +Pilot)

The skill of building and repairing flying machines, including prop planes, jet planes, helicopters, hovercraft, and verbals.

Auto Mechanics (M, MEM-10 +Drive)

Skill of building and repairing land vehicles, excluding hovercraft.

Micro-mechanics (H, DEX-10 +MEM-15)

The ability to build and repair small mechanical devices such as clocks and locks.

Firearms repair (M, MEM-10 +Firearms)

Skill in building and repairing ballistic projectiles. This skill is required to make bullets, but not required to clean the weapon.

Weapon systems (M, MEM-10 +QNT-15 or Engineering +Gunnery-10)

The ability to build and repair large weapons that fall in the gunnery skill.

Lockpicking (M, DEX-20 or DEX-10 +Micro-mechanics)

The ability to open mechanical locks with lockpicks (essentially impossible without them).

Medicine (H, MEM-15 +SYM-5)

The skill of healing injuries and curing diseases. This includes administering drugs and proper diagnosis.

First Aid (E, SYM-10 +MEM or Physiology)

The ability to stabilize injuries quickly. This skill doesn't usually heal an injury, only prevent it from getting worse.

Herbals (M, MEM-10 or Botany+ Medicine or Botany +First aid)

Knowledge of plants and their usage to cure certain injuries and diseases.

Physiology (H, MEM-15 +SYM-20 or Biology-15)

Knowledge of the inner workings of the human body.

Surgery (H, DEX-10 or DEX + Knife or DEX+ Physiology)

The skill of cutting into the body to repair it.

Military intelligence (H, PRC + Strategy)

The ability to use information to construct a successful plan of action in military situation. Specializations include Cryptography, Interrogation, Leadership, and Strategy.

Cryptography (H, VRB+ Mathematics)

The skill of creating and "breaking", interpreting, codes.

Interrogation (M, SYM+ PRS)

The skill of questioning a person to obtain useful information. This includes torture techniques and detecting lies.

Leadership (E, PRS+ Psychology)

The ability to convince others to follow your orders.

Strategy (M, SPL)

The ability to plan a military maneuver when provided with enough information.

Music (H, HER +Art)

The skill of creating pleasant sounds through the use of melody, rhythm, etc.

Musical composition (H, HER or Physics or Musical inst.)

Skill in creating music to be performed by voice or instruments.

Musical instrument (M, DEX+ HER or DEX+ Musical comp.)

The ability to play a musical instrument, this skill needs to be further specialized to indicate which instrument has been learned.

Voice (E, VRB +HER or Acting-15)

The skill of producing beautiful sounds from your mouth.

Navigation (M, SPL+ PRC)

Skill in knowing where you are and how to get to your destination. Specializations include Astrogation, Land navigation, and Water navigation.

Astrogation (M, Pilot spacecraft-15 or Computer operation-5)

The ability to navigate a spacecraft, based on star map coordinates, and calculate hyperspace jumps (FTL travel) with computer assistance.

Land navigation (M, SPL +PRC-10 or Survival-15)

Navigation of land based travel or low flying aircraft using landmarks as the main reference points.

Water navigation (M, SPL +PRC-10)

Navigating boats on open waters, using the stars and charts as guides.

Philosophy (H, MEM-20)

The discipline of thinking about a variety of subjects. This includes the ability to construct a logical argument and rationally defend a position, as well as thinking about the universe. Specializations include Ethics, Logic, and Metaphysics.

Ethics (H, EMP-15 or Sociology-10)

The study of laws and what actions “should” be allowed (based on a particular cultural perspective).

Logic (H, MEM-15 or QNT-20)

The study of arguments and the factors that affect their truth value.

Metaphysics (H, MEM-15 or Religion-20 or Astronomy-20)

The study of the origins of the universe and things such as the existence of God and the existence of a soul.

Physics (M, MEM-10 +QNT-10 or Math +Science)

The study of motion and energy. Specializations include Astronomy, Circuits, Fluids, Nuclear physics, and Kinetics.

Astronomy (H, SIT +MEM-10)

Knowledge of the properties and history of bodies in space.

Circuits (M, Electronics repair)

Knowledge of electricity and magnetism and the operation of wires, resistors, transformers, etc.

Fluids (M, MEM-15 or Plumbing-15 or Pilot-15)

Knowledge of how fluids, such as air and water behave and how they are affected by such things as sound waves and pressure changes.

Nuclear physics (H, Calculus +Chemistry-10)

Knowledge of the structure of atoms, how nuclear reactions occur, and how to harness their energy.

Kinetics (M, MEM-10 +QNT)

Knowledge of how objects move and interact. This includes knowledge of friction, acceleration, velocity, and momentum.

Pilot (H, DEX+ SPL or DEX+ Navigation)

The ability to operate a flying vehicle.

Hang gliding (M, AGI-10 or Prop plane-10)

Skill in flying a glider connected to your body in such a way that your body is the only control surface.

Helicopter (M, DEX-10 +SPL)

The ability to pilot a hovering aircraft. This includes rotor winged vehicles and vectored thrust hoverers.

Spacecraft (M, DEX-15 +SPL-20 or Jet plane-15)

Prop plane (H, DEX-10 +SPL-10 or Jet plane-10)

Skill in flying a propeller powered, fixed wing, airplane.

Jet plane (H, Prop plane-10 or DEX-15 +SPL-10)

Skill in flying a high speed jet aircraft.

Psychology (M, SYM+ Science or Sociology)

The study of human behavior, thoughts, and mental activity. Specializations include Abnormal psych, Behavior, Development, and Social psych.

Abnormal Psych. (H, MEM-15)

The study of psychological disorders and their causes. This skill is used for psychotherapy, if a disorder is involved. One therapeutic practice is hypnosis.

Hypnosis (H, PRS-10 +VRB-15)

The skill of putting someone into a hypnotic trance in which they are susceptible to suggestion..

Behavior (M, MEM-15 +EMP-10 or Animal behavior-10)

Knowledge of human behavioral trends and how to change them.

Development (M, MEM-15).

Knowledge of how humans mentally change from a child to adult and beyond.

Social Psych. (H, EMP-15 or MEM-15)

The study of how humans interact. This knowledge involves conflicts between people, the "rules" and taboos that we create to help us live together, and need for human contact.

Public speaking (E, Acting)

The ability to perform in front of an audience. Specializations include Comedy, Stage magic, Escape, and Concealment.

Comedy (H, Public speaking +Writing)

Telling jokes to an audience.

Stage magic (H, DEX +Concealment)

The ability to perform illusions.

Escape (H,AGI or Stage magic)

The ability to escape from ropes, handcuffs and other bonds.

Concealment (M, DEX)

Skill in concealing small objects on one's body.

Religion (M, MEM-15 or Sociology)

Knowledge of the beliefs, practices, and history of religious groups.

Eastern Religions (M, MEM-15 or Sociology-5)

The study of religions including Buddhism, Hinduism, Confucianism, etc.

Western Religions (M, MEM-15 or Sociology-5)

Christianity, Judaism, and Islam.

Occultism (M, MEM-15 or Magical theory -20)

Knowledge of lesser known (Pagan) religions.

Magical theory (M, Occultism-10 or Metaphysics-15)

The "science" of understanding magical energies, which include spell casting, prayers, and psychic powers.

Robots (E, DEX or DEX +Construction equipment)

The skill of piloting large walking vehicles. These vehicles are usually controlled like regular vehicles. Specializations include Combat robots, Industrial robots, and Exoskeleton.

Combat Robots (E, DEX or Unarmed Combat-10)

Robot vehicles designed for military purposes.

Industrial robots (E, DEX-10 or DEX +Industrial practices-10)

Skill in operating robots used in manufacturing, mining, and other industrial applications.

Exoskeleton (VE, AGI or AGI+ Athletics)

The ability to operate a powered exoskeleton. These vehicles move by mimicking the pilot's own movement. This skill is also used for telerobotic devices that mimic the operator's movement.

Science (M, QNT+ cultural knowledge)

General knowledge of all sciences. The specializations are listed as separate skills. They are Biology, Chemistry, Geology, and Physics.

Sociology (M, EMP-15 or Psychology-10 or Social psych.)

The study of human groups. This skill includes knowledge of the needs of society and some of the solutions that cultures have devised. Specializations include Economics, Institutions, and Law.

Economics (H, Mathematics+ Sociology)

The study of the exchange of money and its affect on businesses.

Institutions (M, MEM-15 or Cultures-10)

Knowledge of the history and function of social institutions such as school, hospitals, and prisons.

Law (H, MEM-20)

The study of the laws and government which exert control over a group of individuals.

Staff (E, AGI+ Polearm)

Skill in using a long thin rod as a weapon. Specializations include Short staff, Long staff and Spear.

Short staff (E, AGI-10 or long staff-5)

Use of a staff which is between 3' and 5' long.

Long staff (E, AGI-10 or polearm-10)

Use of a staff which is between 5' and 7' long, any staff which is longer would require the use of polearm skill.

Spear (E, AGI-10 or Long staff-5 or Polearm-10)

Use of a wooden shaft (3' to 7') with a blade on the end.

Stealth (M, MEM-15 +AGI-10)

Skill in concealing oneself from detection. Specializations include Camouflage, Detection, and Prowl.

Camouflage (M, MEM-15 +SIT-10)

The ability to conceal oneself or a small building in the environment.

Detection (M, SIT-10 +Military intelligence-10)

The ability to detect a camouflaged structure.

Prowl (H, AGI-10)

The ability to move without being noticed.

Survival (M, MEM-10 +ID-5)

The skill of living in a "wild" area, without the benefits of food and shelter. Specializations are based on the terrain and include Arctic survival, Desert survival, Forest survival, Jungle survival, Ocean survival, and Chemical warfare.

Arctic survival (M, MEM-10 +END)

The ability to survive in extremely cold climates.

Desert survival (M, MEM-15 or Ocean Survival-20)

Being able to survive in a hot area with little water and scarce plant life.

Forest survival (M, MEM-5 or Botany +Hunting)

The ability to live in the woods.

Jungle survival (M, MEM-10)

The ability to live in a rainforest or other tropical forest.

Ocean survival (M, MEM-15 or Desert Survival-10 +Fishing)

Being able to live on the surface of the ocean or the sea shore.

Chemical warfare (H, Survival +Chemistry)

The ability to survive in an environment contaminated by chemical, nuclear, or biological weapons.

Sword (M, AGI or AGI+ Axe/mace)

The skill of using a balanced, bladed weapon. Specializations include Baton, Fencing, Short sword, Long sword, and Two-handed sword.

Baton (M, DEX-10 or Sword)

Skill in a short blunt weapon.

Fencing (M, DEX-10 or Sword or Sword+ Strategy)

Skill in using a light, thin sword in a fight or a formal fencing duel.

Short sword (M, DEX-10 or Fencing)

Skill in a short edged weapon.

Long sword (M, AGI-10 or Short sword)

Skill in a long bladed weapon that can be wielded with one hand.

Two-handed sword (M, AGI-10 +STR)

Skill in using a large sword that requires two hands to wield.

Thrown weapons (M, AGI+ SPL)

Skill in hitting a target with a weapon designed to be thrown. Specializations include Axe throwing, Boomerang, Knife throwing, Net, Rock throwing, Shuriken, and Spear throwing.

Axe throwing (M, AGI-10 or Knife throwing)

The skill of hitting your target by throwing a small axe.

Boomerang (M, AGI-10 or Axe throwing)

Skill in throwing an object specially shaped to return when thrown.

Knife throwing (M, AGI +SPL)

The skill of throwing a balanced knife.

Net (M, AGI-10 +SPL)

The skill of capturing a target by entangling it with a net or lasso.

Rock throwing (M, AGI-10 or Team sports-10)

Skill in throwing a round object that fits into one hand. This skill includes the use of rocks, baseballs, bricks, and bottles.

Shuriken (E, DEX-10 or Knife throwing)

Skill in the use of well balanced star-shaped throwing weapons.

Spear throwing (M, AGI-10 +SPL)

The skill of throwing a spear or javelin.

Unarmed combat (E, AGI or AGI +Brawling)

The ability to fight without the use of weapons. Specializations include Brawling, Martial arts, and Improvised weapons.

Brawling (E, AGI or Martial arts)

A non-specific method of street fighting often found in bars.

Martial arts (H, AGI or AGI+ Brawling)

Highly trained method of Oriental fighting often including some weapon training.

Improvised weapons (M, PRC +Staff or PRC +Knife)

The ability to use chairs, bottles and other found objects as weapons.

Writing (M, VRB-10)

Skill in composing a pleasing and descriptive work of literature. This obviously require literacy in the language involved. Specializations include Fiction, Nonfiction, and Poetry.

Fiction (M, VRB-10)

The ability to write stories of people and events.

Nonfiction (H, VRB-10 +Skill in subject)

The skill of writing about technical matters in a way that others can understand.

Poetry (M, VRB-10 or Fiction +Art-10)

The skill of writing descriptive and symbolic works.

Writing for AR

Alternate Realities is designed to be an open-ended, modular game system, in which player/writer expansion is encouraged. In order to streamline the process of creating and distributing *AR* related material, we have created a system of "standards" and nomenclature to differentiate the various types of possible contributions from one another. While reality designers are obviously encouraged to use their judgment, we ask that designers try to adhere to these guidelines in order to ease the use of *AR* as a whole.

Modular Rule Supplements

Modular Rule supplements provide additional and/or alternative rules for use with a wide variety of realities. Often, these may serve as "building blocks" for custom realities; alternately, existing realities may be "tweaked" by the use of a Modular Rule Supplement. Examples of Modular Rule Supplements might include:

- ◆ A "generic" high-fantasy magic system
- ◆ A set of alternate rules for character advancement
- ◆ A supplement which details rules for miniatures combat in *AR*
- ◆ A list of 19th century firearms, with stats and cost information

In general, your contribution should be labeled as an MRS if it is fairly "generic" and can stand alone reasonably well. Note that it is quite possible to create a Reality Guide (say, a "cyberpunk" themed Reality called "Ascent of Chrome") and then release pieces of that guide separately as MRS's (in this case, for instance, a set of rules for cyberware). The difference between the Reality Guide and the Modular Rules Supplement is that the former defines a complete gaming environment, while the latter describes a particular component.

Reality Guides

An *AR* Reality Guide details a particular gaming environment, complete with any special rules which apply there. Reality guides provide GMs with campaign "worlds", and as such are the workhorses of the *AR* system. Conceptually, these worlds are all "children" of the Primary Reality (defined in this guide), and inherit its properties except as indicated otherwise by the reality designer; he or she may also choose to have his or her reality inherit properties from one or more Modular Rule Supplements. In this way, Reality Guides can be rich without duplicating previous work, and without requiring players to obtain multiple copies of redundant documents. However, designers are asked to be very explicit regarding any such inheritance, and use of the *AR* citation system (see below) is recommended.

Reality Supplements

Often it happens that players and GMs come up with additional rules, expansions, or campaign ideas for specific game environments. In *AR*, these innovations are considered to be Reality Supplements. Reality Supplements are, really, quite similar to Modular Rule Supplements, save in that they refer to a specific reality guide. When trying to decide whether a product should be referred to as an RS or an MRS, ask yourself whether or not the product assumes that a particular Reality Guide is in use; if so, it's an RS.

Supporting Products

Like everything else, Alternate Realities is open to the existence of supporting products. A program for computing combat results, for instance, would be considered a "supporting product", as would an AR T-shirt. In general, if an innovation is related to, or aids in, game play without actually being a part of the game system per se, that innovation is considered to be an SP. Thus, a LambdaMOO core which was modified to support the AR rule system would be an SP, while a special set of AR rules for virtual real-time interaction would be an MRS.

Labeling Your Supplement

To put all of this together, we offer the following as the suggested way to refer to an AR product:

Type	Symbol
Modular Rule Supplement	[MRS]
Reality Guide	[RG]
Reality Supplement	[RS]
Supporting Product	[SP]

AR citation format: [Type] Name (Author) <Reality Modified>

Consider, for instance, the following examples:

- [RG] Chameleon (Carter Butts)
- [MRS] A New Fatigue System, v2.0 (Brian Rayburn)
- [SP] Decorative DRF Curtains (Karim Nassar)
- [RS] Including Trolls in Gnomus (Brian Rayburn) <Gnomus>

While it may seem to be a bit obsessive to set out a particular way of referring to AR supplements (and perhaps it is!), our rationale in doing so is that it is better to get some standards laid out right away than to try to come up with them later (when things are already a mess). We hope that reality designers will choose to follow these guidelines, not because it gives us any particular personal satisfaction, but because this will make it much easier for AR players to exchange ideas. Unlike most gaming systems, AR has not been designed under the premise that the original authors will be the only, or even the primary, ones who determine the system's ultimate evolution; *Alternate Realities* won't be a success until our original work is buried beneath a mountain of player innovations.

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