Sufficiently Advanced

Sufficiency Beta Rules (Build 3)

Introduction

Sufficiently Advanced (or SA) is a roleplaying game about humanity in the far future. This book is a minimalist version of SA called "Sufficiency." It's the core of what you need to play the game.

The book begins with a glossary, continues with character creation and the basic rules of play, includes a look at the most important pieces of technology, and ends with some GM advice. The full version of the book includes much more technology, a full selection of civilizations with which to populate your universe, multiple settings, and more extensive advice.

Glossary

Those who have not played Sufficiently Advanced before may want to read through this before going further. This glossary contains primarily rule-oriented terms rather than setting terms.

Action: The Theme that makes your character into an action movie hero.

Biotech: Technology derived from biology and related sciences. Its contributions to the modern age are too numerous to list – a truly ubiquitous technology, it includes all medical and agricultural methods. As a Capability, Biotech represents your character's physical health, including strength, stamina, and running speed.

Capability: Your character's ratings in the five basic types of technology: Biotech, Cognitech, Metatech, Nanotech, and Stringtech.

Civilization: In general, a culture and nation. When capitalized, Civilization refers to one of the major groups of humanity spread across the universe. In mechanical terms, each Civilization gives its citizens a pair of Core Values and a special benefit. Each character must pick a home Civilization.

Cognitech: Technology derived from cognitive science. Advanced calculation modes, fast-learning procedures, and sophisticated research techniques fall under cognitech, but its best-known product is the Mesh. As a Capability, Cognitech rates your character's mental faculties, from rational thought to creativity and intuition.

Comprehension: The Theme that gives your character insights into the world.

Core Values: The most important things in your character's life, the points of his or her moral compass. Characters typically have four Core Values: two of their own, and two taken from the Civilization in which they were born. Rated 0-4, they allow your character to resist specific types of metatech assaults, and also provide Reserve that can be spent on related actions.

Empathy: The Theme that makes others trust and confide in your character.

Expertise: The skills and knowledge that your character has obtained. Some characters have Expertise limited to just a few professions; others are competent in many fields or fantastically focused in a single area.

Infosphere: The successor to the Internet, the Infosphere is far more pervasive and immense. Its name comes from the idea that it blankets a planet in much the same way that the planet's atmosphere does. Nearly every piece of computing equipment – which means nearly every device in a high-tech civilization – contributes to the Infosphere.

Intrigue: The Theme that gives your character an involvement in politics and espionage.

Lens: A program run on a Mesh to change one's viewpoint or emotions. Lenses can also provide talents and skills. They are perhaps the most potent and best-known applications of the neural mesh.

Magnetism: The Theme that allows your character to attract a following or inspire others.

Mesh: A computer-brain interface, composed of millions of nanowires woven through the brain and connected to a small but powerful computer housed elsewhere in the body. Meshes are the basis of high-level cognitech.

Metatech: Technology derived from social sciences. Memetics and psychohistory are its most famous products. As a Capability, Metatech rates your character's social skills, from making friends to orating to designing societies.

Plot Immunity: The activation of a Theme to protect a character from particularly deadly assaults or annoying circumstances.

Psychohistory: A predictive theory of history, allowing probabilistic forecasts of future events. Works best on large groups.

Replicator: A nanotech device that creates other objects quickly, atom-by-atom, with great precision. Replicators are a cornerstone of many a civilization's industry, along with transmutation.

Reserve: Points that can be spent to push the limits of your character's abilities. Each character has no more than one Reserve, and the more Reserve that is spent during a conflict the worse the collateral damage will be.

Romance: The Theme that lets your character attract or deflect the romantic attentions of others.

Nanotech: Technology derived from chemistry and quantum physics. Almost all sensors and modern construction techniques come from nanotechnology. As a capability, Nanotech represents your character's senses and manual dexterity.

Society: A group that exists in multiple Civilizations, with a particular viewpoint on life and the universe.

Stringtech: Technology derived from string theory and its successors, the "ultimate theories" of physics. Known for many dozens of warlike inventions, and also for transmutation chambers and wormholes. As a Capability, Stringtech rates your character's ability to deal and prevent physical damage.

Terror: The Theme that brings horror elements into the game, either for your character or for those around her.

Theme: Your ability to change the plot in specific ways. You can spend Twists through one of these scores to effect changes in the world. The eight Themes are Action, Comprehension, Empathy, Intrigue, Magnetism, Romance, Terror, and Wonder. Characters have a descriptor in each Theme that determines where they are applicable. Players know about their characters' Themes, but the characters themselves do not!

Twists: Points allotted to each player, with which they can change the course of the game. Twists are spent "through" various Themes to effect changes in the story that your character might not be capable of creating. They are generally gained as bad things happen to your character.

Wonder: The theme that creates a sense of awe and brings fantastic things into the game.

Common Setting Elements

The following items appear in essentially every setting for Sufficiently Advanced. They are listed here for reference.

Old-Worlders: "Ordinary humans" who live with a minimum of technology, typically the amount one would see in the 15th to 20th centuries. The Amish are the sterotypical model for an Old-worlder culture.

Cargo Cults: Civilizations that are built around a single technology, typically one that is self-repairing and utilitarian.

Stardwellers: A civilization that embraces high technology and utilizes it to the fullest.

Character Creation

Your character in Sufficiently Advanced is defined by six things: Civilization, Society, Neuroform, Core Values, Themes, Capabilities, and Expertise. Civilizations, Neuroforms, and Themes are detailed using ***descriptors***, words with specific meanings that are referenced by other rules or that are interpreted by your play group. Core Values, Capabilities, and Expertise are rated on a 0-4 scale.

Begin by considering your character's Civilization and Society (page 4). Next, pick a Neuroform (page 5), Core Values (page 6), and a set of Themes (page 7). You should pick your Capabilities (page 8) and level of Expertise (page 9) carefully, because the more you have of these the less you will be able to activate your Themes. Finally, record your Import (page 11)

Checklist

1. Choose or create a civilization. (page 4)
2. Choose or create a society, if you'd like to. (page 4)
3. Choose a Neuroform. (page 5)
4. Name your CVs. (page 6)
5. Choose your Themes and their Descriptors. (page 7)
6. Set your Capabilities. Record your Tech score. (page 8)
7. Pick your Expertise. (page 9)
8. Record your Import. (10 minus any adjustments from Tech score and Expertise.)

Civilization and Society

Each character comes from a particular civilization. In game terms, a civilization passes on a set of beliefs and benefits to each of its citizens. More fundamentally, it is your character's home.

The full rulebook details twenty different civilizations, each spanning multiple planets. If your GM doesn't specify a preference, you can choose to have your character come from one of those, or you can create your own from whole cloth. In some games your GM may want you to choose your civilization from a specific list, to create a specific feel for the game or to set up particular storylines.

If you invent your own civilization, take a few moments to consider your character's home world and other worlds in that civilization. How do those worlds deal with such things as immortality, intellectual property, digital intelligences, and personal freedoms? What religions are prevalent? What does the civilization call itself, and what do outsiders call it? Is it bound to a single world, or spread across dozens? How does this culture feel about its long-lost relatives from across the stars?

This sort of exercise can easily take all night. Skim the surface for right now. You will have the opportunity to elaborate on your civilization as the game progresses.

You should pick up to three of your Core Values (see page 6) that link you to your civilization. Other individuals in that civilization will share those values to some extent. Even characters who were programmed as digital intelligences and have just come into existence are typically graced with someone else's point of view and basic morals.

You may also choose to state that your Neuroform applies to all others in your civilization, or to have your character be considered unusual.

Finally, you may choose a benefit that all in your civilization enjoy: competitive advantage (see page 15) in a single Capability, or an extra Twist (page 7) at the beginning of each session for use with a particular Theme.

You may also belong to a society. Societies are groups that spread across multiple civilizations. They are typically smaller than civilizations – some number in the millions, but some have only a few thousand members. Societies can be well-organized groups: you might be part of a secret society that trades and collects persona lenses from famous individuals, or an organized criminal cartel that spreads across the stars. Societies can also be a catch-all for people who typically share a Core Value: medical caregivers, people in high society, or people who worship a particular deity.

Being part of a society is optional. If you choose to be part of one, link one of your Core Values to that society. When that CV is rated at 2 or higher, you receive a benefit: a competitive advantage in a particular Profession, or a special Profession that only members of that society can have. The special Profession should be broader than usual, covering the same ground as two standard Professions.

As with your civilization, the setting book contains many societies that you can choose from, or you can invent your own. If you create your own, consider how this society would fit into multiple different civilizations. Think about how it is seen by others, and how its members view each other. What rituals or beliefs do they have? Are there other societies who are their rivals?

Once you have your civilization (and society, if you want one), move on to your Neuroform.

Neuroform

Neuroforms describe your character's mind and how it is organized. A wide variety of people are possible within each neuroform, but the contrast between different neuroforms is very large. Many characters will have no descriptors at all; their neuroform is referred to as "Baseline" (or occasionally as "Baseline Dynamic," to contrast it with the Static neuroform). Citizens in the majority of civilizations in this game have a Baseline neuroform.

Neuroforms appear in contrasting pairs. Characters pick one of the two from each set. The typical item appears on the left, and characters with Baseline neuroform have all of the left-hand items.

- ***Dynamic or Static:*** The Dynamic neuroform represents characters who wear a Neural Mesh (see page 33). They can download Professions, alter their Core Values intentionally, and run Lenses (see page 33). Such characters can also be the target of brain-hacking. In comparison, Static minds have limited ability to change themselves quickly. Characters capable of using Meshes are not Static.
- ***Physical or Dataform:*** Physical characters, in short, have bodies. Dataform characters are primarily minds. They exist with minimal physical form (possibly just energy), and interact best with the infosphere. Characters who are digital intelligences or uploaded humans would have this neuroform. Dataform characters have no Biotech Capability, but treat it as if it were equal to their Cognitech for matters such as Tech score and Professions.
- ***Single or Multiple:*** Characters who are Single have only one mind. Characters who are Multiple run the gamut from small group-minds up to continent spanning compositions made up of millions of people. Single minds have a single massive point of failure; multiple minds have many points of failure but can be in lots of places at once.
- ***Autonomous or Parasitic:*** Autonomous minds run on their own hardware. Parasitic minds run on the processing power of others' brains. Those others must be taken care of, or they will become worn out and need to be replaced. Parasitic minds receive Twists when their nature gets them in trouble.
- ***Sovereign or Slaved:*** Sovereign minds run their own software. Slaved minds run other peoples' software. Their minds are the playthings of another; they can be controlled at any time by a particular individual or group. Slaved minds receive Twists when their nature gets them in trouble.

It is important to note that one's neuroform is normally a choice. In a high-tech civilization, no one needs to be parasitic. No one needs to stay static. While changing neuroform is an arduous process, it is no worse than the work of a year or so. There are many free services to help people change who they are. Characters who are Slaved are an exception – this neuroform is often imposed as a punishment, or as part of a spy network, and few people freely choose it.

Changing your Mind

With a Dynamic neuroform, your character can change his or her mind simply by going into the "brain settings panel" and changing the settings, or by downloading an appropriate Lens. This includes altering Core Values. However, Core Values are the things in which your character **genuinuely believes.** You should have a good reason for giving up on those things – a major story event that shakes the foundations of your character's beliefs. A Dynamic Neuroform doesn't let you pick whatever CVs are most convenient unless you're willing to give up on your other beliefs.

Core Values

Core Values describe what your character believes in. They are the basis of your motivation. Core Values also hold civilizations and societies together, giving them something to rally around.

Core Values are most often abstract concepts and causes, such as love, freedom, order, charity, and so forth. More rarely, they can be a person or a place. They are guidelines not only for you as a player, but for your character as well: most characters recognize their own Core Values and will be able to eloquently (or at least stubbornly) defend them.

Your character has five Core Values, four of which which you may invent. Samples are found in the sidebar. Each is rated from 0-4, based on the depth of your character's convictions:

0 I don't really care.

1 I will argue for this belief.

2 I will take action for this belief.

3 I will suffer for this belief.

4 I am obsessed with this belief.

You may choose whatever rating you like – high scores are as much a handicap as an advantage.

When in a conflict, your CVs add directly to your effectiveness as long as you are acting in accordance with them. You may only add the highest CV. The exception is when people try to convince you to take a particular action that aligns well with your CVs. You might or might not be able add your Self-Preservation CV, but you always *subtract* the aligned CV when resisting such tempting persuasion.

All characters receive a fifth CV entitled "Self-Preservation" at 3 for free. You may rename this to "Enormous Ego" or "Fight Like A Cornered Rat" or the like, but the general gist is that you care about your own survival. You may alter the value of this CV with GM approval.

With a CV of 2 or higher, you may escalate (or deescalate) conflicts you are involved in related to your CV, forcing both sides to suffer a Complication one level more (or less) severe than would normally be indicated. You can only do this once per conflict. You may also receive Twists for Complications that are related to your Core Values (see sidebar, page 22).

Some Sample Core Values

Accountability, Anonymity, Authenticity, Brotherhood, Calm, Carpe Diem, Caution, Charity, Community, Competition, Completeness, Complexity, Concealing Knowledge, Connection, Continuity, Control, Creation, Creativity, Details, Diligence, Discovery, Diversity, Efficiency, Elegance, Entitlement, Excitement, Expansion, Experimentation, Exploration, Expression, Faith, Family, Fellow Officers, Foresight, Freedom, Friendship, Good Breeding, Grand Works, Growing Up Right, Growth, Hierarchy, Home, Honesty, Hospitality, Humanity, Humility, Identity, Immersion, Independence, Individuality, Information, Interconnection, Invention, Knowledge, Law, Life, Logic, My Congregation, My Constituents, My Crew, My Students, My Team, My Town, New Horizons, New Things, Obedience, One Coin One Vote, Order, Peace, Physical Perfection, Pleasure, Power, Privacy, Profit, Property, Protecting Others, Questioning, Rank Has Its Privileges, Reciprocation, Recklessness, Recycling, Responsibility, Ritual, Safety, Sanctity of Mind, Sanity, Secrecy, Security, Serenity, Showmanship, Silence, Simplicity, Solidarity, Stories, Survival of the Fittest, Teamwork, The Body, The Forge Of Battle, The Future, The Horizon, The Law, The Public Good, Tough Luck, Tradition, Travel, Truth, Understanding, Unity, Variety, Wanderlust, Winning, Worship

Themes and Twists

Themes are the bread and butter of this game. They allow players to manipulate the game in ways that are appropriate to their characters, in exchange for suffering setbacks of one kind or another. There are eight Themes: Action, Comprehension, Empathy, Intrigue, Magnetism, Romance, Terror, and Wonder. Each one carries a descriptor that defines the sorts of situations where that character's Theme is appropriate to use.

Using your Themes requires spending Twists; see page 20. At the beginning of a game session you start with Twists equal to your Import (see the text box on page 11). These do not carry over from game to game. Your Themes are linked with your Capabilities in such a way that high-Capability characters find it difficult to gain Twists.

To choose your Themes, simply pick three that apply to your character and choose descriptors for those three. Some sample descriptors are listed next to each one, but you can also invent your own.

Action: One Man Army, Superspy, Won't Fall Down, Unstoppable Vengeance, Berserker, Natural Gymnast, Ninja Skills, Parkour, Hacking, Chase Scenes, MacGyver

Comprehension: Intuitive, Logical, Emotional, Forced Monologuing, Explanations Ex Machina, Methods Behind the Madness, Invention, Religious, specific branches of technology, specific profession

Empathy: Reluctant, Bad News, Matters of Love, Trusting Fools, Shoulder to Cry On, Good News, Day-to-Day, Problems, From Afar

Intrigue: Eavesdropper, Pillow Talk, Digital, Political, Instant Insider, Stumble Upon, Psychohistorical, Spy, Government Newsfeed

Magnetism: Fame, Friendship, Political, Ideological, Physical, Convincing, Memetic, Cult, Pheromonic, Religious, Bullshit Artist, specific cultures or kinds of people

Romance: Long-term, Short-term, Hopeless, Unexpected, Tragic, Legendary, Sexual, One-Night Stands, Devoted, Manipulative, Loving, specific types of people

Terror: Personal, Impersonal, Creepy-crawlies, Insert-a-phobia, Splatterhouse, Conspiracies, Ancient Evils, Lovecraftian, Technological Threats, Loss of Control, I'm Mister Creepy

Wonder: Scenic Vistas, Philosophical, Religious, Art, Deathless Prose, Big Dumb Objects, Small Things, New Discoveries, Scientific, Uncovering the Overlooked

Good descriptors restrict the use of your Theme, but not too much. If you dream up a set of situations that are related to that Theme, your descriptor should make it so that you can only imagine using your Theme in about half of those situations. Descriptors that allow their Themes to be used all the time are not restrictive enough to be meaningful. Descriptors that only make their Themes useful about quarter of the time are probably too restrictive to be fun playing.

Not all Themes appear in every game. Your GM will let you know if any Themes are inappropriate for the type of game he or she is running.

Capabilities

Your character has five Capability scores, each based on one type of technology. These describe your inherited abilities, technological implants, and generalized training. ***Biotech*** represents fitness, strength, endurance, and internal energy stores. ***Cognitech*** describes your character's logical ability, quality of thought, memory, and speed of learning. ***Metatech*** represents charisma, charm, savvy, force of will, and perfect inflection. ***Nanotech*** represents precision, perception, hand-eye coordination, and stealth. ***Stringtech*** represents raw physical power, both offensive and defensive, provided by devices built into your body. In addition, each Capability has a range of tricks and tools of which enhanced characters can avail themselves.

Each Capability will end up with a 0-4 numerical rating, with higher ratings indicating greater enhancement and adding directly to your effectiveness in conflicts. You may rate each Capability for your character as you see fit. Not all civilizations offer all enhancements, but this should not restrict you as you create your character.

Characters whose bodies and minds are similar to 20th-century humans are said to have "unenhanced" Capabilities. Such Capabilities have a numerical rating of zero. To use Biotech as an example, Unenhanced characters are assumed to be neither crippled nor olympic athletes, but may run the range between a flabby couch potato and an amateur athlete.

Most characters in SA have Capability ratings of 1-4, indicating that they are enhanced in one manner or another. They have devices built into their bodies, improved genetics, techniques they have learned since childhood, and so forth. Those with a rating of 4 are sometimes referred to as having "cutting-edge" enhancements.

Characters who want a Cognitech score of more than 2 must have the Dynamic neuroform.

What Can I Do With My Capabilities?

Biotech

0 Unenhanced human muscles and bones.

1 Animal-level prowess and enhanced senses. Control over autonomous bodily functions.

2 Poison glands. Lift a ton. Redundant organs. **Immortality.**

3 Organ regrowth and slow regeneration. Analysis of pathogens by scent or taste. Stay awake for a month.

4 Slow metamorphosis. Internal virus factories. Breathe water with your lungs. Skydive without a parachute.

Cognitech

0 Unenhanced human minds.

1 Accelerated thought processes.

2 **Neural Meshes and the Dynamic neuroform.** Use of Lenses. Infosphere connection.

3 Persona recording and alteration. Memory recombination and sharing. Weapons and defenses for mesh-hacking.

4 Internal simulatiors and predictors. Never hesitate.

Metatech

0 Normal conversation

1 Mental conditioning. Non-verbal communication.

2 Intent analysis. **Read others' CVs and Professions.**

3 Memetic viruses. Psychohistory.

4 Weaponized body language. Hesitation induction.

Nanotech

0 Unenhanced eyes, ears, and fingers.

1 Infrared and UV vision. Hear very high or low pitches. Sonar. Perfect proprioception.

2 **Read others' Capabilities.** Dermal microbots. Radar and radio hearing. See the entire electromagnetic spectrum.

3 Nanophages. Replicators. Gravity wave sensors. Built-in spectrometer and other forensic sensors.

4 Dark matter sensors. Nanometer-precision touch.

Stringtech

0 Unenhanced fists and feet.

1 Knives and guns.

2 Anti-tank weaponry. Built-in electrical reserves. **Energy weapons and defenses.**

3 Antimatter weapons. Transmutation. Supersymmetric weapons and defenses.

4 Flight. Wormholes (in some settings). Spatial mirrors. Force on par with a nuclear blast.

Civilizations and Capabilities

In the previous edition of SA, your character's civilization impacted his or her maximum Capabilities. In the second edition, this is no longer true – while civilization descriptions do list a maximum Capability value, you can decide to play a character who has "sold out" his or her heritage for greater ability without penalty. It is still worth considering the Capability level for your civilization as you create your character, but more for story purposes than for game-mechanics reasons.

Expertise

Whereas Capabilities represent inborn talent and technological enhancement, Expertise represents your character's training and experience. Much like Capabilities, Expertise is ranked numerically and adds directly to your effectiveness in a conflict. Sometimes the bonus granted by expertise is useful in a fairly narrow range of situations, while other times is is very broadly applicable.

There are four types of Expertise, used to indicate a character's depth and breadth of knowledge. All of the options are compatible with each other, and the effects and requirements are cumulative.

Proficient: You may choose three professions (see sidebar) and rate them 1, 2, and 3. Characters of Static neuroform and unenhanced Biotech must take this option, but it is also open to all other characters. There is no other game effect.

Adept: You have trained extensively in one particular technological area, or you have a natural knack in it. Pick one technology and receive the Engineer and Researcher Professions, as well as three other related Professions, all at level 3. You must have Dynamic neuroform and/or enhanced Biotech. If you have only enhanced Biotech you must be at least 500 years old. Adept-level Expertise adds one point to Tech.

Omnicompetent: Your character is broadly competent in a vast array of fields. Perhaps you are a long-lived jack of all trades, or perhaps a Lens collector. In any situation where Expertise is relevant, you have a rating of 2, without needing to download Lenses. You must have Dynamic neuroform and/or enhanced Biotech. If you have only enhanced Biotech, you must be at least 500 years old. Omnicompetence adds one point to Tech.

Satori: You have a great depth of experience in a particular field, the kind only seen from an immortal who has dedicated his or her life to the topic or a severely obsessed individual. Choose a profession and rank it at 4. You must have both Dynamic neuroform and enhanced Biotech, or choose a Core Value that you consider linked to this profession and rank it at level 4. If you lack the linked Core Value, you must be at least 1000 years old. Satori adds one point to Tech.

All characters are also assumed to be familiar with their home civilization – its language, customs, values, history, geographical layout, and so forth. **This is represented by the Locality profession, which all characters receive at level 2 for free.**

Professions are ranked from 0-4. Rather than creating a huge list and trying to describe each profession in great detail, here are some guidelines as to what each level of a Profession can do.

0 Untrained. Anyone can do things requiring this level of skill.

1 Modicum of training – just a year or two. Many tasks are still likely to be beyond your reach.

2 Professional level. Ten years of training. You can do almost all of the things that fall into your field, and can earn a living with in this profession.

3 A lifetime of experience. You are respected by others in this field and are capable of innovating within it.

4 One of the best ever. A thousand or more years of experience, or complete obsession with the subject.

All professions have certain tasks that are considered "specialized." Anyone can plant a backyard garden; only someone with the Farmer profession can manage a full-sized farm. Anyone can shoot a gun; only someone trained in the Soldier or Police profession can expect to do it accurately under pressure. Characters with a Core Value of 3 or higher can attempt these specialized tasks without the need for the appropriate Profession, as long as the task aligns with the Core Value. Anyone else is stuck.

Clearly this requires a certain amount of adjudication, and not all groups will contain an expert politician player to answer questions about Politics, or a policeman with forty years of experience to speak authoritatively about what the Police profession should include. **Because Professions are intended to be restrictive, if the answer is uncertain, treat it as a "no."** Characters who want to be exceptionally competent can purchase higher levels of Professions without much difficulty, and should do so if they feel they will need such an advantage.

Sample Professions

A Profession is a set of all the skills you need in order to make your living in a particular manner. Here are a few that you can choose from when your Expertise allows it.

Artist (pick two media), Athlete (pick two sports), Courtesan, Criminal, Crisis Control, Engineer (pick one tech), Explorer, Farmer, Financial, Legal, Locality (pick one civilization), Media, Medical, Outdoorsman, Police, Political, Programmer, Religious, Researcher (pick one tech), Soldier, Spacer, Spy, Teacher.

Tech and Import

Your character's Import score is his or her importance to the plot, irrespective of any other attributes. It determines the number of Twists you have available at start each game session.

Average the numerical values of your character's two strongest Capabilities to get your Tech score, between 0 and 4. Only the two highest count. Round down. For instance, a character with Metatech 4, Cognitech 2, and scores of 1 everywhere else would have a Tech rating of 3. A different character with a rating of 3 in every Capability would also have a Tech rating of 3.

Your Expertise may also add to your Tech score and thus reduce your Import.

The higher your strongest Capability is, the lower your total Import will be, and the more difficult it will be to garner Twists. **Your starting Import is 10 minus your Tech score. Subtract your Tech score from the number of Twists you get from any Complication that you willingly accept (see page 23).**

Character Examples

Breath-of-Mist

Civilization: Breath-of-Mist comes from the Stardwellers, a high-tech and wide-spread civilization that travels the universe deals with many other civilizations. Their benefit is a free Twist for use with Wonder, and their Core Values are Freedom and Diversity.

Neuroform: Baseline Dynamic

Core Values: Freedom 3, Diversity 2, Carpe Diem 2, Unity 2, Self-Preservation 3

Themes: Comprehension (systems dynamics), Romance (bad ideas), Wonder (new horizons)

Capabilities: Biotech 4, Cognitech 2, Metatech 2, Nanotech 2, Stringtech 1.

Expertise: Adept: Biotech. Ranked at 3 in Biotech Engineer, Biotech Research, Crisis Control, Medical, and Outdoorsman.

Tech: 4 ***Import: 6***

Astina of the Sun-Circlers

Civilization: Astina comes from a Cargo Cult, one with two factions at war with each other over the course of hundreds of years. They have a competitive advantage in Stringtech. The cult's Core Values are Ritual and Worship.

Neuroform: Baseline Static

Core Values: Ritual 3, Worship 1, Property 3, Freedom 2, Self-Preservation 2

Themes: Magnetism (too crazy to stop), Empathy (bullshit artist), Comprehension (explosives)

Capabilities: Biotech 1, Cognitech 0, Metatech 0, Nanotech 2, Stringtech 1.

Expertise: Proficient. Soldier 3, Scout 2, Farmer 1, Locality (Cargo Cults) 2.

Tech: 1 ***Import: 9***

Sotyet Aleph-fold

Civilization: Sotyet is a DI hierarchy whose selves research fractal spacetime disruptions near black holes. It is part of the Replicants, who create multiple copies of themselves for convenience and profit. Replicant characters gain an extra Twist that can be used when representing something done with their duplicates. The Replicants' Core Values are Life and Safety.

Neuroform: Dataform, Multiple

Core Values: Life 3, Safety 3, Investigation 2, Fellowship 2, Take Care Of Myself 3

Themes: Comprehension (multi-layered things), Terror (catastrophic accidents), Magnetism (scientific community)

Capabilities: Biotech --, Cognitech 4, Metatech 3, Nanotech 2, Stringtech 2.

Expertise: Adept. Ranked at 3 in Engineer, Researcher, Crisis Control, Media, and Programmer. Locality (Replicants) 2

Tech: 5 ***Import: 5***

Abraham Ezekiel Driver

Civilization: Abraham is an Old-Worlder, from Earth itself. Old-Worlders have a competitive advantage in Metatech as they speak for the homeworld of humanity. Their Core Values are Tradition and Simplicity.

Neuroform: Baseline Static

Core Values: Tradition 3, Simplicity 2, Worship 3, Humility 3, Self-Preservation 3

Themes: Comprehension (emotional), Romance (matchmaker), Wonder (simple things)

Capabilities: Biotech 0, Cognitech 0, Metatech 0, Nanotech 0, Stringtech 0.

Expertise: Proficient. Farmer 3, Outdoorsman 2, Religious 1, Locality (Old-Worlders) 2.

Tech: 0 ***Import: 10***

Flowering Unreason

Civilization: Flowering Unreason is a Disciple of the Void, who believes that the voice of God can be heard in the silent places of the universe – the billion-light-year-wide voids between galaxies. Their Core Values are Worship and Privacy. She benefits from their free Stealth profession.

Neuroform: Baseline Dynamic

Core Values: Worship 3, Privacy 2, Discovery 2, Efficiency 3, Self-Preservation 3

Themes: Intrigue (easily overlooked), Empathy (reluctant), Comprehension (eavesdropper)

Capabilities: Biotech 2, Cognitech 2, Metatech 2, Nanotech 2, Stringtech 1.

Expertise: Proficient. Religious 3, Crisis Control 2, Programmer 1, Stealth 2, Locality (Disciples) 2.

Tech: 2 ***Import: 8***

Model IV

Civilization: Model IV is a Lens that has gained sentience and seeks to remain free. Model IV was created by the Eternal Masquerade, whose Core Values are Identity and Anonymity. Their advantage is an extra Twist for use with Intrigue.

Neuroform: Dataform, Parasitic

Core Values: Identity 4, Self-Improvement 2, Anonymity 3, Gossip 1, I Must Remain Free 4

Themes: Empathy (host's sympathies), Terror (taking control), Intrigue (DI gossip network)

Capabilities: Biotech --, Cognitech 4, Metatech 4, Nanotech 2, Stringtech 2.

Expertise: Satori (Courtesan). Proficient. Medical 3, Legal 2, Criminal 1, Locality (Masquerade) 2.

Tech: 5 ***Import: 5***

Game Mechanics

Basic Actions – The Four Questions

There are two basic ways for your characters to affect the world around them. The first is through the use of their Capabilities and Professions, which are available to all characters. The second method is through the use of Themes and Twists, which are available only to the players' characters. Theme use is described starting on page 20. We will focus on the use of Capabilities first.

Characters taking unopposed actions will find success or failure based primarily on four factors: their Core Values, their Expertise, their Capabilities, and their players' ingenuity. For each factor, determine a "yes" or "no" answer based on the following guidelines.

Core Values: Does the character care about the outcome of the event? Is he or she willing to put in the time and effort required?

Expertise: Does the character's Expertise cover these sorts of tasks? Does he or she have substantial experience in this area, as represented by a properly-ranked Profession?

Capabilities: Are the character's Capabilities up for the job? Is he or she enhanced in such a way as to make the task reasonable? Does the character have tools that would help in this area?

Ingenuity: Is the task one that is simple, easy, or obvious given the character's attributes? If not, can the player invent a way in which to use those attributes and solve the problem? Can the player redefine the problem to be a solvable one, or find a way around the issue?

If you find the answers to be "yes" in three out of four categories, you should consider the task accomplished. The higher the character's attributes, the faster the task can be done. If all four categories are on the character's side, the task will be completed in style, quickly, and with a minimum of fuss.

If most of the answers are "no," however, the character is doomed to failure. Without enhanced Capabilities, the character may know *how* to achieve something without actually being able to accomplish it – the classic "If only I had a..." Lack of Expertise can lead to botched efforts and imperfect work that falls apart quickly. Lack of an appropriate CV leads to a an uninspired effort, short on passion or dedication. A lack of ingenuity on the player's part cements these, and ingenuity on its own can only accomplish so much.

When considering particularly complex or skill-oriented tasks, Expertise is the most important factor. Certain tasks simply cannot be attempted, let alone completed, without the appropriate skills in place. Someone who has never picked a lock before is doomed to stand aimlessly before it, stymied by a lack of knowledge. The shark-filled waters of national politics are likewise impossible to navigate without some experience. The GM should be fairly strict on this front.

Conversely, the applicability of Core Values should be fairly wide when it comes to basic actions. A character who has the skills and technology necessary to complete an action can succeed if they care about something broadly related to the goal.

Examples

An Old-Worlder is irritated by a sizable stone in his field. It needs to be moved if the plow is to get through. Without enhanced Stringtech or Biotech, he cannot simply pick it up and move it. However, the player suggests that, as an experienced farmer, his character can probably hook up chains to a tractor and pull the stone out. His CV of "My Farm" is clearly applicable in this case.

A character is stuck on a Cargo Cult world and wishes to acquire gold for money and high-tech construction. She has Stringtech 3, which includes transmutation beams. She will starve without money,

and her Self-Preservation CV comes into play. Unfortunately, she has no scientific skill, and without Infosphere access is unsure of how to set the beam to produce pure gold rather than merely act as a weapon. Her player suggests that the character can dig up a periodic table and a chemistry text to supply some numbers, and find a supply of a simple element (such as Hydrogen) to act as a base. The GM agrees that this is sensible. The process is slow, but it works.

En route to one crisis, a character is asked to solve another. She is presented with a tricky political situation that requires significant mediation. While the character has enough Expertise, has Share The Load as a Core Value, and is loaded with Metatech, the player is stumped as to handle the situation quickly enough. He must now choose for his character – which crisis is worth his character's time? Who must she help, and who will she abandon?

A character seeks to escape exile on an asteroid before he runs out of oxygen. He has the Spacer Profession, and this is clearly a matter of Self-Preservation, but lacks sufficient Stringtech or Nanotech to create fuel. The player seeks for inspiration, but the asteroid is barren and remote. Rather than face failure, the player changes the terms: she suggests using her expert-level Spacer skill to set her spacesuit for a hibernation mode. Her character cannot escape, but he can at least await rescue. The GM agrees.

As a result of a battle, a character is trapped beneath a ton of rubble. The Self-Preservation CV comes into play here. Unfortunately, he lacks the Stringtech or Biotech required to escape, and frankly there aren't many Professions that cover digging oneself out from beneath an avalanche. No amount of player ingenuity is going to help at this stage – he's stuck there.

The Consequences of Failure

Because of the all-or-nothing nature of basic actions, the consequences of failure can sometimes seem severe, as in the example with the man trapped under the rockslide. Remember that after a player's character fails at a critical action, the next step is typically the use of Themes. If a Complication arises because of this, that's exactly how the game is supposed to work.

Not all failures are life-ending. Some simply indicate that the character isn't capable of solving the problem quickly enough or decisively enough. Sometimes you simply accept the failure and move on.

Failure on the Four Questions does not constitute a Complication and does not provide Twists unless the Bad Luck rule is in place (see next page)

Do I need a Core Value to tie my shoes?

No, you don't need a relevant just CV to tie your shoes. The basic game mechanics are designed to answer whether characters can do things that are difficult or challenging. If something is clearly trivial, don't use these rules for it, just let it happen.

What counts as "trivial" varies from person to person, of course. Demolishing an old-worlder building is trivial for a high-Stringtech character, as is designing one for an architect with 500 years of experience. Demolishing a reinforced bunker quickly or designing a grand cathedral would be considered challenges.

What about Bad Luck?

The GM may offer you some Twists to turn one of your answers to one of the Four Questions from a "yes" to a "no." This is intended to be used to model those times when you should be able to handle the situation, but dumb luck intervenes. Your computer crashes the night before the exam. You can't find your keys. The Lens you wanted to use has a virus. Life gives you lemons, but you get some Twists.

The number of Twists you receive is dependant on the level of Complication that is being offered. As usual, this is reduced by your Tech score, but you can still get one Twist even if your Tech score is higher than the Complication level.

You are not required to accept the offered Twists. You may reject them and succeed despite the bad luck. If you do accept the Twists, treat this as a voluntary Complication – the Frying Pan Rule applies.

Competitive Advantage

Some civilizations have a "competitive advantage" in a particular Capability. Some Societies have that in a particular Profession. Competitive advantage can take the answer to the Four Questions from a "no" to a "maybe," or from "maybe" to "yes." This can be especially useful when the character needs a Capability that he or she does not have. It enables the character to rely on unusual tricks and cutting-edge techniques from a different Capability to achieve unexpected and amazing results.

Assistance from Others

"Two heads are better than one" is a common saying for a reason. Team efforts, whether from just one assistant or a large group, can take the answer to the Four Questions from a "no" to a "maybe," or from "maybe" to "yes."

Assistance is most often helpful in terms of Capabilities. A group of non-experts is likely to come up with a decidedly non-expert consensus as to how to act, based on half-remembered facts or near-facts. Groups of experts often squabble over personal interpretations and complex details. What is most effective is a team of experts all working for a common goal – that is, sharing a Core Value.

Teamwork's most reliable impact is that it simply speeds things up. Ten people may not quite work ten times as fast as one person, but they can come close.

Teamwork in conflicts is different; see page 19.

Conflict

Basic actions and the Four Questions are designed to handle unopposed activities. However, the more exciting parts of the game happen when your character is facing opposition. This chapter deals with those kinds of interactions.

Conflict Summary

When characters come into conflict, follow these steps:

1. Each side adds a Core Value, a Capability, and a Profession to get a total.
2. Declare goals and intended Complications based on the difference in totals.
3. Play through the conflict and describe how the Complications occur.

Conflict in Detail

Put simply, conflict occurs when one character's goals are incompatible with another's. When it becomes clear that this is the case, every side involved should state their goal explicitly. This is a player-level statement – the characters may not realize each other's true goals, or even that they are in a conflict at first. (See the "Subtle Conflicts" sidebar for more about how to handle this.) However, it should always be clear to the players what the stakes are.

The consequences of a conflict come in the form of Complications. Unlike Complications accepted to fuel Themes, these Complications do not provide Twists.

Each side should have a particular Complication in mind going into the conflict, one that can represent the character's actions and intentions accurately in game or story terms. Only one item from a particular level should be chosen. If you inflict a Complication on your foe, you cannot choose more than one effect. You also cannot buy multiple weaker Complications instead of a more serious one – for instance, you can't trade in a Major (5) for a Minor (3) and two Trivial (1) Complications. However, you can choose to inflict a lesser level if you desire.

Along with your goal, you should state which CV, Capability, and Profession your character will use to achieve it. If you lack a suitable Profession, you cannot achieve that goal.

Difference	Effect
± 7	No contest. The loser is at the winner's mercy, taking a critical complication while the winner is unharmed.
± 5	Crushing. The winner takes a trivial complication, and the loser suffers a critical complication.
± 3	Decisive victory. The winner takes a minor complication, while the loser suffers a major complication.
± 1	Narrow victory. The winner takes a minor complication, while the loser suffers a moderate complication
0	Stalemate. Both sides suffer a minor complication.

It is assumed that you will be switching tactics and pulling tricks during a conflict. You might use an unexpected Capability, such as intimidating people using Biotech (rather than Metatech) to show off your strength or release fear toxins into the air. However, there is only one Profession involved. Even if you set someone up with a few verbal quips, a punch to the gut is still thrown with Soldier, or perhaps Athlete (Boxer). **Your final goal is what determines the Profession involved, not the means that you use to achieve that goal.** You can't punch someone with Athlete (Boxer) and make them lose money. Someone with a very high level in a Profession is likely to be able to use it for more purposes, such as using Police to work with a media outlet and release a missing-persons story. Overlap is inevitable and ok. Try to keep this to level 3 and 4 of a Profession; be more strict with characters at the 1 or 2 level.

Once you have your goal and its means stated, add the levels of the relevant Core Value and Profession to your Capability score to get a total. You should end up with score between 0 and 12. You will be comparing your total to that of your opponent.

In general, the higher total wins. In cases where the scores are close, the winning side will not come out unscathed.

It is vitally important to note that characters with Nanotech 2+ can read Capability scores without effort, and characters with Metatech 2+ can do the same for Capabilities and Core Values. As a result, **characters are likely to know their fate before engaging in a conflict.** The phrase "I don't think I can do much here" should be in every character's vocabulary, followed immediately by "Let's see where I can be more effective."

Serious Threats Are Sentient

The conflict system should be used for dealing with intelligent opponents. If a character is up against a non-sentient force, even a complex computer program, use the Four Questions to resolve the event. If you're uncertain of where to draw the line, the relevant question is this: Does the obstacle in your character's way have Core Values? If not, it's not sentient and should be addressed with the Four Questions.

The Obligatory Instant Death Cutscene Rule

There are many, many things in this game that can instantly kill your character without warning. Inversion beams, warlike nanobots hidden in the brain, supernovae, suicide Lenses, and more are real dangers in this game setting.

Whenever the GM is about to deploy something utterly deadly against the PCs, she is obligated and required to describe a short scene detailing the hazard. The characters have Themes, after all, and can often find ways to avoid certain death. The players should not "metagame" a way out of this, using knowledge their characters could not have, but are highly encouraged to use Twists to good effect.

The OIDCR does not generate Twists on its own. See page 22 for things that do, and ways for tapped-out players to get a few Twists in this kind of situation.

Timescales

Your chosen effects should be achievable on the same timescale as your opponent's. If someone assaults you with an axe and an intent to do grievous bodily harm, responding with a carefully orchestrated psychohistorical campaign is not going to stop you from ending up in multiple pieces. If Metatech is your thing, perhaps some Words of Power or a memetic virus will help you come out with only minor wounds. If your opponent in a long-term action comes back with a shorter-term goal, you can feel free to revise yours in order to match theirs. You can return to your previous efforts afterward, pending the results of the conflict.

The Battle vs. The War

Changing timescales for a conflict can be very useful. It forces your opponent into a faster conflict, presumably one where you have the advantage. However, winning the short conflict will not give you the same results as winning the longer one. If you're sick of a political debate, you can change it into a fistfight, but it might not get you the results you're looking for.

Escalation

The conflict rules do not assume a knock-down, drag-out, anything-goes environment. However, as some people say, "there's no kill like overkill."

Any character with a Core Value rated at 2 or higher can escalate a conflict. Both sides then receive a complication one level higher than would otherwise be indicated. Conflicts can only be escalated twice: once by each side.

Characters can only escalate when their Core Value aligns directly with the conflict in question.

Multiple Opponents

When three or more people are in a single conflict, first make sure that their goals do indeed conflict with each other. You may be able to simplify this down to several one-on-one conflicts.

If several people team up to take down a larger threat, and then squabble amongst themselves, treat it as two regular conflicts, one after another. Use the teamwork rules on the next page.

In the case of a true free-for-all, with many conflicting goals and each participant (or group) out for themselves, things can easily ratchet up in intensity. You are allowed to inflict Complications on each and every participant you face, based on the difference in your scores. You do not have to inflict Complications on everyone if there are people you would rather leave out of the affair, but it is your option to inflict one if your score allows it.

When you escalate against multiple opponents, there is still a maximum of a double escalation for any one character.

Themes Uber Alles

Remember that Themes and Twists automatically trump all other measures, regardless of the relative difference in other scores. A character with a reasonable supply of Twists can easily escape unharmed against massively superior opposition. Meanwhile, one with a pending complication *will* face it, regardless of what countermeasures are employed.

Conflicting Goals

You've found the spy in your ranks, and are chasing him down. You have only a narrow advantage – if you escalate, you can exact a Major complicaiton, but the spy gets a Moderate complication in return. The spy chooses "your foe escapes unharmed" to represent his escape; you choose "kidnapped" to represent the capture. What happens?

What happens is that you **both must choose new goals**. If the higher rank Complication always won, escape would be essentially impossible due to the setup of the system. The original question of the chase may remain unanswered, or may be obvious given the situation.

You might choose "Important Secrets Revealed," while the spy might choose "Befriended by the Enemy." You get the information you want from the spy, but in the process, he earns your trust. Who wouldn't let their friend go in such a situation?

Teamwork in Conflicts

When working as a team, use the following table to determine the effectiveness of the group. Use the highest score in the group as the base number.

Group Size	***Modifier***
Just You	+0
2	+1
3 – 10	+2
11 – 30	+3
31 – 100	+4
101 – 300	+5
x3 bigger	+1 more

Bonuses generally cap out at +4. For massively parallel processes (e.g. economics), cap at +6 instead.

Escape!

Characters who have been caught and are in a conflict they want no part of may simply wish to escape. There is a Complication at the Minor (3) level that states, "Your foe escapes," and another one at the Moderate (5) level that states "Your foe escapes unharmed." Use these to achieve such a goal.

Subtle Conflicts

Particularly masterful characters may be able to defeat others without having them even realize they have been bested. Take a -3 penalty to completely hide your actions from your opponent, winning secretly. You may still end up suffering a Complication due to exhaustion or use of resources.

Instant Kill, Not Instant Fight

Almost all weapons and techniques in S.A. are capable of doing what they need to in a single stroke. An unprotected and unprepared person, or one caught by surprise, will fall almost instantaneously before the weapons brought to bear in high-tech combat. Fights are handled through the Conflict system because characters will either have the Capabilities to detect weapons brought to bear, the Expertise to have the hairs stand up on the back of their necks, or enough Twists to handle things via the Obligatory Instant Death Cutscene Rule (page 17).

Using Themes

Themes alter the world around your character, bringing certain story elements into play. Twists are spent "through" these Themes to alter the story. The more Twists you spend, the greater effect you can achieve.

Activating Themes

To activate a particular Theme, you spend a particular number of Twists, choosing from the values below to describe the effect you create. One typically buys either Impact or Information, but sometimes both are useful. Several examples follow.

Duration

0	Temporary	No more than a scene.
2	Game	A whole game session, or most of one.
4	Story	Until the end of this story arc (or about 3-5 game sessions).
X	Permanent	You cannot achieve permanent effects.

Scope

0	Extras	Affects only a small number of unnamed NPCs.
2	Self/Group	Affects your character or team, or a substantial group, like a town.
4	Named/ Nation	Affects a named NPC, or a group on the size of a Society or larger.
X	Civilization	You cannot affect an entire civilization.

Impact

0	Ignorable	The effect could be ignored with trivial complications.
2	Substantial	Force a course of action on an NPC. Remove an NPC from gameplay.
4	Critical	Undo last turn's action. Alter NPC allegiances or Core Values. Invoke Plot Immunity (see page 21).
X	Drastic	You cannot affect PCs in a way that would bring up the Rule of Force (see page 25). You cannot alter rules.

Information

0	Known	The information is available somewhere publicly, if not obviously.
2	Secret	The information is a simple fact, but is concealed.
4	Extensive	The information is both concealed and tough to understand; your character now understands it.
X	Unintended	The GM is not required to give you secrets you do not ask for.

PCs Only

All characters in SA have Neuroforms, Capabilities, Civilizations, Expertise, and Core Values. Only player characters have Themes. Not even the most important of GM characters has Themes, or Twists with which to activate them. Themes are the province of player characters.

Theme Use Examples

Our heroine is known as a famous athlete, with the Theme Magnetism (Sports Hero). People tend to people crowd around her in public spaces. This costs no Twists – small groups are involved (Scope 0), they don't follow her for more than a scene (Duration 0), and the people could choose to ignore her (Impact 0).

Our hero is being targeted by an orbital inversion beam that will vaporize him. He doesn't know this, so it triggers the Instant Death Cutscene Rule (page 17). He invokes Plot Immunity through his Romance (Old Flings) Theme, spending 4 Twists (Impact 4). The operator of the beam sees him on the scanner and can't bring himself to kill his old love. The beam blasts a hole in the ground next to the character.

One of our heroes seeks government office, but has little chance in this closely-packed political scene. He uses his Intrigue (Instant Insider) Theme and spends six Twists (Duration 2, Scope 0, Impact 2, Information 2) to find some blackmail material on an unliked candidate. Suddenly there's an open spot in the race.

A patrol sweeps past our heroine as she hides. They are about to detect her. She uses her Wonder (Starships) Theme and spends six Twists to invoke Plot Immunity (Duration 2, Scope 0, Impact 4). The patrol is caught fascinated as an exploratory vessel flies by low overhead, and she makes her escape. She won't have any trouble with them for the rest of the session.

You have successfully angered an entire society of medics, and they're out to get you. So much for "first do no harm." Unfortunately for them, you have the Terror (Technological Threats) Theme. You spend eight Twists (Duration 2, Scope 4, Impact 2) and a terrible bioengineered flesh-eating plague arises. For the rest of the game they'll have better things to do than worry about you.

The guy you're chasing; is he really at the top of the power structure, or should you be barking up a different tree? Ten twists spent through Comprehension (Forced Monologuing) should give you all you need to know. (Duration 0, Scope 4, Impact 2, Information 4)

Plot Immunity

Speding 4 Twists will allow you to invoke "Plot Immunity" for your character. Plot Immunity is a way of saying, "I'm in danger, but I'm going to get out of it somehow." It's very useful when dealing with the Instant Death Cutscene Rule.

Plot Immunity is most believable when it's focused through your Themes, or involves your Capabilities or Professions in some way. Use things that are already established about your character to get you out of the mess in some amazing but inevitable way. Plot Immunity works best when your character is off-screen, or has an obvious solution to the problem.

Plot Immunity is also a way of telling the GM that you'd like this particular hazard to be over and done so that you can get back to other parts of the game. You might have a problem that could be taken care of in other ways, given a little legwork and some trading favors, but Plot Immunity will do it right away.

In most cases, you will not need to spend any points on Duration, but it is occasionally necessary. Supernovae can take a long time to ride out. You can also spend extra points on Duration to avoid having to deal with this hazard again in the future.

Gaining Twists

Twists come from several different sources, as described in the sidebar. However, the greatest source of Twists is a Complications. You, the player, are allowed to describe problems that your character must overcome. Generally, only rough descriptions are necessary. Your GM will fill in the rest.

When you take a Complication, you do not need to spend the associated Twists immediately. You may "bank" them, if you so desire, until the end of the current session of play.

The next page gives examples of Complications you can accept in order to gain Twists. The number in parentheses indicates the number of Twists that are available by **willingly accepting** the listed complication. The GM will often be placing your character into situations similar to Complications; you receive no Twists for this. You also do not receive Twists for Complications incurred as the result of a conflict.

The Frying Pan Rule

When dealing with a Complication that you willingly accepted, you cannot spend Twists to ameliorate its effects in any way at all.

Complications are also explicitly allowed to end the duration on existing Theme uses and bring elements removed by Plot Immunity back into play.

You *may,* if you wish, avoid Complications that you received as a result of conflicts by spending Twists. Only Complications that you took in order to get Twists are immune to them.

Characters subtract their Tech score from the number of Twists they gain from any particular Complication. Highly-enhanced characters end up as the plot's punching bag. This tends to work out ok, because everyone else is their punching bag for most of the game.

Sources of Twists

Bad Luck: The GM may offer you Twists in exchange for turning one of your answers from one of the Four Questions from "yes" to "no." The number of Twists is equal to the level of Complication that ensues, minus your Tech score, with a minimum of one. The Frying Pan Rule applies.

Core Value: If you have a CV rated at 2 or higher, you receive one extra Twist each time you suffer a Complication related to that CV. GMs are encouraged to interpret the word "related" liberally. You do not receive this extra Twist for your Self-Preservation CV.

Mental Defect: If your neurotype is Slaved or Parasitic and you suffer for it, you gain Twists in the same way you would for bad luck.

Overwhelmed by Tech: The first time in a gaming session that you face a particular opponent who takes advantage of a Tech score higher than yours, you gain Twists as you would for bad luck. You gain this once per opponent per session. Count groups of opponents (e.g. a police force) as a single foe.

Theme Stymied: The first time during a gaming session that your GM overrules the use of a zero-cost Theme, you gain a Twist.

Because The GM Said So: Your GM may decide give you Twists at any time, for any reason.

Complications

The number in parentheses is both the number of Twists provided by the Complication, and the amount of Impairment (see below) under which the character suffers.

Trivial* (1): Trivial complications are short-term and low-impact. Examples: Annoyed. Distracted. Barely taxed. Lose track of a single being among dozens during a riot. Trip but catch yourself. Suffer a moment of doubt. Brain fart.

Minor (3): Minor complications can be annoying if you don't take care of them (or if several build up), but they are unlikely to be a problem in the short term. Examples: Your foe escapes. Slightly delayed in your plans. Your location is revealed to a distant enemy. Minor but noticeable monetary loss. Minor injury. Temporarily exhausted resources.

Moderate (5): Moderate complications are long-term or high-impact, but not both. Examples: Kidnapped. Your actions are revealed to a distant enemy. Befriended by the enemy. Significantly delayed in your plans. Material possessions destroyed. Substantial injury. Resources severely taxed. Your foe escapes unharmed.

Major (7): Major complications are both long-term and high-impact. Examples: Deluded by the enemy. Convinced of a particular fact or falsehood. Important secrets revealed to the enemy. Allies turn against you. Friends lost. Your Society rejects you. Severe injury. Unconsciousness. Resources lost forever.

Critical* (9): Death and fates worse than death. **Complications at this level may bring the Rule of Force into play.** Examples: All Core Values changed. Dying or near death. Exiled from your beloved homeland. Brainwashed or mesh-hacked extensively. All your close friends turned against you. Long-term plans ruined. This condition does not fade quickly or easily.

* Players may only take one Trivial and one Critical complication per game session, but may take as many others as their aching backs can carry.

Impairment Effects:

1 point decreases a Capability by 1
1 point decreases a Core Value by 1
1 point decreases a Profession by 2
2 points inflicts a -1 penalty in all coming conflicts.
2 points changes a CV that has 0 points.
2 points raise a Core Value by 1, to a maximum of 3.

For instance, a character who suffers a Moderate Complication in a battle might be injured. The GM or opposing player might assign 5 points of Impairment as follows: -2 to Stringtech (disabled weapons), -2 to Biotech (exhausted from the fight), and -2 to the Soldier profession (rattled by the loss). In different circumstances, the same Complication might be assessed differently: -1 to Biotech, Stringtech, and Nanotech from wide-spectrum damage, and a further -1 penalty in coming conflicts until the damage is repaired.

Not all options make sense with all Complications. For instance, because this was a battle (using the Soldier profession) and not a brainwashing session, destroying old Core Values and building new ones would not be appropriate for this Complication.

Critical Complications typically do not use Impairment to limit their effects – they can have any game effects necessary to impose their story effects.

Recovery

It is possible to recover from any complications, short of certain items at the Critical level. Complications created through conflict can be removed by the use of Themes, but complications willingly accepted in order to gain Twists cannot (see the Frying Pan Rule).

The general length of time that Complications last is "until you get them fixed," which can vary greatly depending on the situation the characters find themselves in. For some (such as "befriended by the enemy"), the character may not be capable of fixing his or her own issues, and may need help from others. Complications left unaddressed may persist indefinitely, but it is recommended that only Major complications last more than a single game session, and only Critical ones should have permanent effects.

The Big Deal Rule

A Complication that does not cause problems for its character is not a Complication. Twists are not gained from Complications whose effects can be easily ignored.

Complications: Game vs. Story

Complications have two parts: an impact on the story (e.g. kidnapping, loss of income) and a game effect (e.g. losing 2 points of Capabilities, temporarily losing access to the Finance profession). Who gets to choose what those effects are?

During conflict, the player and GM (or occasionally two players) decide on both the story effect and the game effect for each other's characters.

When intentionally accepting a Complication to gain Twists, the player may describe the story effect on his or her character for that Complication. However, the GM chooses the game effect.

Sometimes the GM or the inflicting player might choose to waive a game effect, deciding that the story impact as described warrants no effect in game terms. However, until the Complication is fixed, the effects can always be applied later if they seem appropriate to the situation. Story effects should not be waived – they are the "why" of the Complication, and merely applying penalties to character attributes does not provide enough detail or make for an interesting enough story.

Existentialism

Because life can get complicated for characters in SA, there are certain rules regarding what does and doesn't count as "your character." You may end up getting mindwiped, destructively scanned into a computer and printed back out, saddled with a data ghost that wants to control your brain, and worse. When does that remove your ability to play your character?

The Rule of Intent: If something happens to your character as an intentional result of your character's actions, you control the resulting character. If you run a Persona Lens, walk into a replicator, have a frontal lobotomy, or even kill yourself so you can be resurrected later, you still play the resulting character even if one could argue that it "isn't still you."

The Rule of Force: In the case of drastic changes to your character that your character would have opposed, knowing the outcome, you or the GM may decide that you no longer control the resulting character. If you get forcibly cloned, shot and killed, mesh-hacked and enslaved, brainwashed, etc. into something your old character wouldn't have agreed with, the default is that it's time to pick up a new character – the old one is now an NPC. You and the GM can talk about it if you still want to play the resulting character; if either one of you says "no," then it's time to make a new one.

The Rule of Identity: All versions and instances of your character are still yours to control unless the Rule of Force comes into play. If you intentionally made 100 copies of yourself, you have authority over all of them. If someone made a clone of you without your knowledge, things would depends on whether your character would appreciate that or not, as per the Rule of Force.

The Rule of Reversals: If the drastic changes mentioned in the Rule of Force are substantially reversed, you may, at your option, regain control of your character.

The Rule of Ontological Inertia: If a character leaves play, permanently or temporarily, the player can still activate Themes from the character until the player receives a new character or the old one returns to play. This primarily applies to dead or unconscious characters. Such characters are unlikely to garner Twists, so playing a permanently dead character limits one's options.

One item that didn't quite make it to "rule" status is the Guideline of Equal Play. In SA there are many ways to multiply the effectiveness of a character. If the party splits, duplication may allow certain character to follow both groups at once, or even split into multiple parties all by themselves. However, due to the need to share play time with other players, a player who has split their character should expect that some actions will be glossed over. A 100-body one-man police force is great, but its player won't be roleplaying each of them individually.

Technology

Technology and its impact on society are the largest and, to us, most important themes in Sufficiently Advanced. Each civilization is based not only around its core values, but on how those values interact with and are built upon the technology that civilization uses.

This chapter contains the twelve most important pieces of technology in SA: the things that change the world, or the things that nearly everyone has. Each is described in terms of its implications for the game world, its effects and limitations, and various game terms.

The full version of SA includes many other pieces of technology that are described in less detail – additional weapons and defenses, household items, applications, pieces of modern infrastructure, and so forth. It may be tempting when you see a list like this one to assume that it is a complete list, and that nothing else exists in the game. We encourage you to assume the reverse: if you can think of it, someone has probably invented it. From genetic modification to cybernetic drugs, from weaponized body language to self-replicating nano-medicine, from terraforming to starships, there are a lot of creative people in the future and they've invented a lot of creative things.

SA is intended to be a "hard sci-fi" game. The technologies are incredibly advanced, and many of them are speculative, but none are entirely outside the realm of possibility. However, you don't need to be a physicist or biologist to play the game. If you come up with something and you're uncertain as to whether it can exist or not, the more important question is "will this make for an interesting game."

Tech Descriptors

Check here to see what any technology Descriptors mean.

Auxon: This device is self-replicating, and will continue to create more of itself until a predetermined limit is reached.
Dataform: This technology is pure computer code, and exists only on the Infosphere.
Energy: Weapons with this Descriptor fire energy instead of (or in addition to) physical matter. Stringtech 2+ provides this descriptor, as well as suitable defenses against it.
Infrastructure: This technology requires substantial resources to employ, perhaps those of a city or entire civilization. It is not something that gets installed in individual characters.
Inheritable: This enhancement will, in all likelyhood, pass on to any of the character's children born after it is acquired.
Internal: This enhancement is completely internal to the human body. Cursory examination will not reveal its presence; it takes exploratory surgery or Nanotech to discover it.
Microscopic: This device is impossible to see with the naked eye; it requires Nanotech 2+ to detect its presence.
Near-c: Weapons with this Descriptor either fire energy or deliver projectiles at nearly the speed of light.
Procedure: This is not a device, but a learned and practiced procedure. There is no way to "deactivate" such technology without rendering the user unconscious or employing psychotropic drugs.
Supersymmetric: Weapons with this Descriptor fire particles of dark matter, which pass through ordinary matter and are unaffected by most types of energy. Stringtech 3+ provides this descriptor, as well as suitable defenses against it.

Characters who "lack an appropriate defense" suffer a -1 penalty in conflicts where their opponents press that advantage.

Body Swapping

Some characters in SA have the ability to move their mind (be it a brain or a digital mind) from one physical body to another. Depending in the technology and neuroform involved, the process may be as complex as a brain transplant, or as simple as placing a chip into a socket. The new body will give the character a new set of Biotech, Nanotech, and Stringtech scores.

Implications

Characters with the right neuroform can change bodies easily. With the broad availability of replicators, a new body (whether mechanical or flesh-and-blood) is easy to obtain. Because of this, seeing someone with a new body is as common in some civilizations as seeing them with a new haircut.

Bodies that are commonly available in replicator catalogues will have easily traced fingerprints, short-lived radiation traces, or other well-known identifiers. Custom-designed bodies are expensive, and records of purchase are kept. Criminals who attempt body-switching to evade capture will be disappointed – only well-funded and well-organized cartels can get away with this sort of tactic, and they are typically brought down by other methods.

Gender becomes a much more flexible concept when one can start the day male and end it female. Race and visual age are an intentional choice. Height, strength, beauty, and even coordination and balance become things that can be chosen, and chosen quickly, without significant cost. Some civilizations thus choose to place emphasis on having a unique body rather than one that would be considered conventionally attractive.

Low-tech civilizations often have a visceral reaction against this technology. Many cargo cults and old-worlders will see it as strongly unnatural.

Limitations

Baseline characters, born in the traditional way, must undergo a change before they can wear a new body. Most take one of two routes to body swapping: digitizing the mind, or braincaseing. Digitizing the brain requires a destructive scan, slicing the brain down and encoding it into a computer one cell at a time. Braincaseing takes the brain and places it into a container with access for nervous system connections and nutrient feeds.

Altering your existing body can be done, but it is not a fast process. It can require days or months depending on the extent of the change. Chemical changes in the brain can result in a very different personality for what is essentially a new person.

Adapting to a new body can take time. The higher the character's Cognitech score, the faster it will happen. Access to Stringtech is nearly instantaneous; understanding the input from new Nanotech sensors can take longer.

Game Terms

Descriptors: Procedure. Many bodies are technically Auxons.

Effects: Players should recalculate their characters' Tech and Import scores when switching between bodies. If the new body has a reduced Tech score, gain Twists equal to the difference in scores. If it has an improved Tech score, changing bodies costs Twists. Characters who cannot pay the Twist difference cannot change bodies.

Core Tech: Cognitech. Stringtech or Biotech will be needed as well.

Entropy: Creating a new body is sometimes energy-intensive, but the process of transferring is typically easy.

Mentality: Coordinating a particularly large and complex body may be facilitated through simple mentality – a "hindbrain," if you will. Bodies with extensive sensors may include a data ghost to interpret them for the inexperienced. Most bodies do not require this.

Dermal Microbots

Dermal microbots are the Swiss Army Knife of the modern world. They enable telescopic and microscopic vision, radio communication and radar, local area mapping, laser audio, fine-scale polishing and abrasion, lidar, sonar, airflow detection, magnetic field mapping, motion sensing, manipulation of microscopic objects, and more.

These microscopic robot live on the wearer's skin. Every few days the robots return to a special "central facility" for repairs. This matchbox-sized facility is typically housed on the belt or on a bedside table, but occasionally implanted in the body. The robots are loaded with nano-scale devices, including manipulators, lasers, photodiodes, accelerometers, and more. They communicate with each other, with the infosphere, and with microbots worn by other people.

Implications

People with dermal microbots can see and hear in all directions. They have incredibly acute senses over great distances if they focus in one direction, much better than a hawk's eyesight or a dog's hearing. They can also see and hear in ranges outside the human norm. In addition to making people very difficult to surprise, this also forces civilizations to deal with a loss of privacy.

A microbot's lasers are strong enough to act as a HUD when projected into the eye. They can also project images on other people's eyes if they're standing close enough to you, and even create brief pulses of light to blind assailants.. Manipulators on the robots can smooth hair and remove dead skin cells (which the robots use for fuel).

Many people ask their microbots to record events around them, which are deleted automatically after a certain number of days. How much of this information eventually becomes public is a matter of personal taste and societal norms.

Dermal microbots cut down substantially on street crime. Being recorded by someone with super-hearing, a retina scanner, and a blinding flashlight is not the ideal situation for a would-be criminal. However, they also enable a level of stalking and eavesdropping that would otherwise be impossible.

Even without a mesh (q.v.) people in the modern world can communicate with each other and with the infosphere. The bots can detect sound from speech, or movement as small as a finger twitch, and use it to trigger various other devices (see "activation codes").

Limitations

The bots are just large enough to be visible to the unaided eye, like a cloud of gnats. Stiff winds can blow the them away from their wearers, so the bots usually retreat into clothing or hair when the wind picks up. The bots do not function well in airless environments, and are restricted to crawling on the skin rather than hovering in the air.

Dermal bots can be hacked from the outside. This does not pose a physical danger, but can leave the wearer open to surveillance.

Game Terms

Descriptors: None

Effects: Characters with Dermal Microbots have Nanotech 1 as a minimum.

Core Tech: Nanotech

Entropy: Dermal microbots produce negligible heat, and require no energy beyond that provided by their central facility and the dead cells they eat.

Mentality: Dermal bots are too small for an individual mentality, but their central facility typically houses a data ghost for ease of interaction.

Digital Intelligence

Digital intelligence is the term for any mind that is based in a computer rather than in a biological mind. The term "artificial intelligence" is still in common use, but primarily as a pejorative.

Digital intelligences fill a vast number of roles in high-tech settings. The least of them are non-sentient assistants embedded in everyday technology. The most impressive are the Aia, vast hyperintelligences built into entire planets, warring with each other in ways beyond the understanding of even the most enhanced humans.

Characters with the Dataform neuroform technically fall under the umbrella of digital intelligences, though many of them are human-descendant and would consider themselves different from "purely" digital minds.

Implications

In most high-Cognitech civilizations, digital intelligences outnumber biological intelligences (i.e. humans) by a significant factor. Nearly every piece of technology has some sort of DI included, as indicated by the "mentality" section in their description.

There is little argument as to whether digital intelligences are "real" in the same sense that biological intelligences are. When your DI begins debating its own reality with you, you start having to concede ground on that front immediately. Many of them are also the result of semi-random algorithmic processes that bear some similarity to biology. It is for this reason that the word "digital" has replaced the word "artificial".

Many children in high-tech civilizations grow up with a digital intelligence **companion**. Such mentalities may take the role of nanny, guardian, pet, or friend, or may transition between these roles as the child grows up. Most companion intelligences move on to other roles when their children come of age – in fact, they are most often the ones who alert the child's parents that the child is ready to assume the role of an adult. In some rare civilizations the companion mentality stays throughout a person's entire life.

Very powerful DIs often leave the realm of human activity entirely. Several settings in SA include the Aia, a group of powerful and brilliant sentiences who are distant from humanity, and who war against each other for vast computing resources. Because of this there is often some concern when dealing with particularly powerful DIs.

Limitations

Lesser, non-sentient DIs (known as **data ghosts**) have minimal ability to adapt to situations beyond their programming. Digital intelligences with full sentience are as capable, adaptable, and in many cases as emotional as biological intelligences.

Game Terms

Descriptors: Dataform

Effects: Characters with a Mesh can interact with many different DI characters through the infosphere.

Core Tech: Cognitech

Entropy: Typically little. The energy and heat cost of maintaining a DI rises as it becomes more intelligent than enhanced humans.

Mentality: Not applicable – DIs *provide* the mentalities for other technologies.

Immortality

Immortal characters will never die of natural causes, nor suffer from old age. They may still die of other causes.

Each of the processes that contribute to old age is gradually conquered or controlled over the centuries. The myriad forms of cancer are cured, DNA is made better at self-repair, minds are enhanced to hold the weight of millennia of memory. Immortality typically comes with an improved ability to heal and other biotech advancements, but they are technically distinct advancements.

Implications

An immortal society may look similar to a mortal one, but scratching the surface reveals a world of differences. In the workplace, immortality ends age-based pay increases and retirement. It also means a potentially limitless amount of training and specialization. At home, immortality necessitates a decrease in birth rates, a transition in the meaning of adulthood, and the end of inheritance. Immortal civilizations have long ago dealt with a population explosion, and must more carefully examine ideas such as property law and compound interest. Any societal concept that depends on the eventual turnover of human beings must be considered, and, if necessary, rejected.

Each civilization faces immortality in a different way. The citizens of certain cultures take on new personas over the years, shedding who they were to become someone new. Some cultures become expansionist, colonizing new planets where children can roam free. In cases where this is impossible, people may "freeze" into their roles in society and become experts without peer.

Some few civilizations intentionally choose mortality. They may choose to reject high levels of Biotech overall, or immortality in specific. No civilization chooses these routes without a strong conviction – a Core Value aligned with their choice.

For another rare subset of civilizations, immortality interfaces perfectly with their beliefs and actions. Such groups are likely to be strongly hierarchical and orderly. For the majority, however, civilizations encountering immortality for the first time are driven toward a psychohistorical crisis point. It is a rare group that does not fracture or change dramatically when confronted with the end of so many social systems.

Limitations

High-quality implementations of immortality include the mental and emotional capacity to handle an indefinite lifespan. Not all implementations are of such high quality, and some Cargo Cults have a very long life of suffering to look forward to. There is also the question of how old the setting itself is – how old are the oldest immortals?

Game Terms

Descriptors: Internal

Effects: Characters with a Biotech score of 2 or greater are immortal.

Core Tech: Biotech

Entropy: Immortal characters' heat signatures and food requirements are not significantly different from those of baseline humans.

Mentality: Most cultures do not involve digital intelligences in their implementation of immortality. However, it is worth noting that most digital intelligences are also themselves immortal.

Inversion

Inversion turns matter into antimatter. When that antimatter collides with normal matter, both are annihilated and immense amounts of energy are released (generally in the form of x-rays and gamma rays).

Implications

In civilizations with Stringtech 3 or higher, electricity becomes nearly free. There is no need to obtain special fuel, no need for high-temperature and high-pressure fusion chambers. Antimatter annihilation is orders of magnitude more efficient than obtaining energy from fusion.

Inversion technology can also be weaponized. The *inversion beam* is a standard firearm in high-tech militaries. These guns send out synchronized pulses of dark matter that pile atop each other to trigger inversion within a target, blowing it apart from the inside. These dark matter pulses travel harmlessly through normal matter until they reach their target, and can hit targets beyond the horizon.

Theoretically, one could build structures from antimatter just as one could from matter. People generally do not do this, as the need to separate these items from normal matter reduces their utility.

Limitations

Free energy does not mean freedom from its consequences. Every bit of energy created in an inversion process eventually becomes heat. Some planets swelter under the increase in global temperature that has resulted from their citizens' energy choices.

Having free electricity does not mean that an unlimited amount of it is available in any particular locale. Superconducting circuits have a limit as to how much current they can conduct at once before they stop working, an event that newsfeeds often describe as "spectacular" or "volcanic."

Game Terms

Descriptors: Supersymmetric

Effects: Characters with Stringtech 3 or higher have access to inversion weapons, which give the Supersymmetric and near-c descriptors.

Core Tech: Stringtech

Entropy: The initial power outlay for inversion is fairly small. The resulting energy release when antimatter and matter annihilate is very large, and substantial heat and damage can result.

Mentality: Large-scale inversion reactors are always watched by data ghosts, which are overseen by more sentient mentalities or by human observers. Inversion beams and other antimatter weapons may have mentalities to aid with aiming, but are otherwise just ordinary (if deadly) weapons.

Implanted Gear

Many characters will have equipment implanted in their bodies. This can be done as the game progresses. It is a hard-and-fast rule that no character may have implanted technology beyond his or her Capabilities. However, all you need to do is to update that character's Capability and Tech score (and Import) to match.

This is purely a game-balance issue, not a technical limitation. By implanting an Inversion Beam, you would effectively be giving yourself the major benefits of Stringtech 3. If you just want to carry the thing around instead, that's fine, but then it can be taken away by various means.

Memetics

Memetics is the study of communication and interaction, in the same way that genetics is the study of DNA and its interactions. As genetics is a foundational piece of Biotech, so is memetics a foundational piece of Metatech.

In much the same way that not all of biotech is genetics, not all Metatech techniques are memetically oriented. Memetics is specifically the study of ideas and their components in various contexts. Other areas of Metatech include (but are not limited to) the study of intra-psyche components within the human mind, the study of how humans interact en masse (q.v. psychohistory), and the manipulation of instinctual triggers built into the human brain.

Implications

Human communication is understood at a very deep level in high-Metatech civilizations. Not only can people communicate exactly what they want to say, but they have a greater chance of evoking the desired emotional response. Naturally, others in a high-Meta civilization also know memetic techniques, and can see through manipulations and verbal evasions more easily. Such civilizations tend to be either very honest and forthright, or cloaked in constant intrigue.

Characters trained in memetic techniques are at a substantial advantage when interacting with low-Metatech characters. They can read emotions from body language perfectly, lie without the chance of detection, trigger nearly any emotional response. High-Meta worlds are often faced with suspicion because of this, which they work fairly effectively to allay.

Memetics is not only useful in spoken communication. Mass media, including infosphere sites and broadcasts, can also be memetically tailored. Characters with a working knowledge of memetics can also communicate their emotions and basic needs very effectively through gesture and body language.

Limitations

Memetics is at its best when dealing with known quantities. A message with a tightly-focused and well-studied demographic is more likely to be effective than one that tries to reach everyone. Learning to target a new type of neuroform could take days.

Some Metatech tools can affect people before they have a chance to look away or turn off their auditory nerves. Memetics are not one of those things. Memetic techniques need at least a few seconds, the beginnings of a conversation or an advertisement, to take hold.

Game Terms

Descriptors: Dataform, Procedure, sometimes Infrastructure

Effects: Characters who are trained in memetic techniques have Metatech 2 or higher.

Core Tech: Metatech

Entropy: There are almost no memetic techniques that require a substantial energy expenditure.

Mentality: Most memetic approaches do not require the assistance of a mentality.

The Neural Mesh

Neural meshes allow their wearers to read and modify their own minds, including emotions, thoughts, senses, and beliefs.

A set of thousands of coaxial nanowires penetrate the brain. These wires connect to a computer, typically housed within the body, and typically connected wirelessly to information sources. Through the mesh, the computer can read patterns within the brain, and can also electronically apply new patterns. Using a mesh is known as "wearing" it, though it is actually implanted and not merely placed on the head.

Implications

Meshes are among the most powerful and wide-reaching technologies, with literally thousands of applications. The field of cognitechnology would scarcely exist without the mesh.

Computer programs that use meshes to interface with the brain are known as **lenses**, as in, "seeing the world through a different lens." Lenses are used to alter the wearer's personality or behavior, "download" skills from the infosphere (see below), attain a certain mindset (such as wakefulness, self-awareness, or calm), simulate the effects of drugs, apply ethical guidelines, and more.

Most Meshes also interface with the **infosphere**, a planet-spanning network of information relayed by nearly every satellite, building, vehicle, and individual. Essentially any factual information that is not intentionally hidden is available within milliseconds at no cost. Many computing and data-analysis services are also available at varying degrees of expense. It is possible to disrupt the infosphere locally and temporarily with broad-spectrum static.

Limitations

Modifying long-term mental structures (memories, values, personality traits) is possible, but takes a long time, as these structures are encoded in the brain itself. Masking these structures by temporarily suppressing memories or overwriting behavior is much easier.

Game Terms

Descriptors: Internal

Effects: Characters with meshes have the Dynamic neuroform.

Core Tech: Cognitech

Entropy: Meshes are low-power, low-heat devices. They put no extraordinary strain on a human-sized user.

Mentality: Meshes themselves do not carry any mentality beyond the user's. However, a myriad of lenses include data ghosts, for tasks ranging from scheduling duties to intelligent companionship to backup personalities.

Fun Things to Do With a Mesh

Filter out any advertising you see. Keep a database describing the local morals and customs, and set it to warn you if you're about to break one. Never forget a name or a face. Impose directional lines over the road you're driving on, to get you safely and quickly to your destination. Set up self-analysis routines to tell you what you're doing wrong at the end of the day. (Most people find these annoying, but those who listen to them often find great benefit in it.) Listen to a single person in a crowd by filtering out everyone else's voiceprints. Spend a day as one of your friends, and have him or her go through your day.

Programmable Matter

Programmable matter takes on the qualities of other matter. It can become pliable as clay, or strong as diamond. A book-sized piece of programmable matter could become a toolkit, a lightweight bicycle, a set of clothing, a weatherproof tent, a bulletproof window, a supercomputer, and more. A surface coated with the stuff might be made frictionless, scratch-proof, perfectly light-absorbent or reflecting, glowing or patterned, or warm to the touch. Different regions of the surface can take on different properties, allowing (for instance) a touch-screen on one side and solar panels on the other.

Implications

Programmable matter is a powerful tool. Most people in high-Nano civilizations own a block of it as an emergency device in case their replicator breaks down. Explorers and travelers often carry it as an all-in-one toolkit.

Those with programmable matter will never lack for infosphere access, a tool, or a weapon. If they have enough of the stuff, they can have some become solar panels to power the rest. They may still lack for food, as creating a working replicator is beyond the current limitations of programmable matter.

Sales (or replications, more likely) of most small useful items drop substantially once programmable matter is introduced. One might replicate pipe, but not a wrench to put it together with. One might replicate a set of nails, but not the nail gun. As those sales decrease, "matter programmer" becomes a more viable profession, and people sell templates for blocks of matter to transform into.

Limitations

Programmable matter can keep some forms without a constant expenditure of energy (the lower-tech the better), but it needs a source of electricity in order to be fully effective. It also needs energy to change from one form to another.

Ordering programmable matter to assume a liquid or gaseous state is a waste of time. One will, at best, be left with a pile of inert scrap.

Because programmable matter requires a constant flow of electricity, it is often cheaper and more convenient to simply fabricate a particular device if it will be used for a long period of time.

Game Terms

Descriptors: none

Effects: Characters with access to programmable matter will always have whatever tools they need, from high-tech devices to basic wrenches and screwdrivers.

Core Tech: Nanotech

Entropy: Programmable matter is an energy hog by low-tech standards. It also grows warm as it is used. Too many transformations in a short time may make it hot enough to burn skin. The larger the change, the longer should be allowed for cooling.

Mentality: Most programmable matter includes several data ghosts that are loaded up for various purposes when the matter is reconfigured. Sentient digital intelligences, however, avoid being housed in programmable matter. There is too high a chance that it will be reconfigured without enough computing power to maintain them.

Psychohistory

Psychohistory is a predictive, stochastic theory of history. It is as rigorous and mathematically intensive as any theory of the physical universe.

Psychohistory uses measurements of human behavior and descriptions of human nature to predict future events. The larger the group being predicted, the more accurate the forecasts. Most psychohistorians study either the gentle trends of human cultures or the crisis events that shape history.

Implications

Psychohistory is, in general, a calming influence on the universe. Both crisis points and general trends can be manipulated by those with an understanding of psychohistory. Few cultures would choose war, and this science provides an alternative means of disputation between civilizations that results in fewer deaths and more certain outcomes. Modern events are constantly shaped by social pressures that are continuously applied by dozens of organizations, each looking to gain in a particular manner.

Groups with more sophisticated methods can apply historical pressures more subtly and from greater distances (in terms of levels of deniability). Thus, the most powerful and stable civilizations tend to be those with a strong understanding of psychohistory. Those groups with a lesser Metatech rating tend to be tossed about by the whims of their peers, calmed by some and whipped into action by others.

In settings without the Transcendentals, Psychohistory provides an excellent plot driver. Characters can be pointed toward crisis points and attempt to tip the balance.

Limitations

Psychohistory relies on a known baseline for its subjects – details must be gathered about the population over time, from psychological profiles to historical trends. An undiscovered human civilization would be very difficult to predict at first; an alien one, more so. Psychohistory also becomes inaccurate as the group size shrinks, becoming useless on groups of less than a thousand individuals. Even on very large groups it is only a statistical science, predicting things that may occur and their probabilities of occurrence.

Because psychohistory involves large numbers of individuals, it is also susceptible to historical inertia. Events are easier to change with a long lead time, and very difficult to change in the short run. Crisis events give a way around this, allowing for swifter but less certain change.

Game Terms

Descriptors: Procedure, Infrastructure

Effects: Characters leading a psychohistorical operations unit can engage in civilization-level conflicts.

Core Tech: Metatech

Entropy: No power sources are needed beyond those for moderate computation.

Mentality: Slight shifts in events must constantly be refactored into psychohistorical predictions. Large organizations commonly delegate a group of high-level digital intelligences to monitor these constant developments and the outcomes. These DIs typically share in the larger group's Core Values, but are fairly diverse beyond that, to provide a multitude of viewpoints. Particularly animistic civilizations may treat this DI cloud as an oracle.

Replication and Transmutation

Replication is the ability to create a finished product from raw materials quickly, on the molecular level. They can also "scan in" objects to create a reproducible blueprint. Replicators range from multi-purpose vacuum-sealed chambers with carefully modulated feeds of various elements, to single-purpose **seeds** that can be carried around and used anywhere.

Transmutation recombines matter on the subatomic level to create one element from another. It functions safely in an enclosed chamber, but can also be found weaponized as the **transmutation beam**.

Implications

Replicators spell the end of manufacturing; transmutation, the end of mining. Replicators also obviate the need for farming in many civilizations. Entire industries are wiped out by these technologies. Designing objects for fabrication is an important profession. Only unique works of art or objects under patent protection are of monetary value. Many civilizations build intellectual property protection software into their replicators, to charge a fee for the creation of items that are protected under law.

Most day-to-day objects are free, or nearly so. Public replicators can be found in most civilizations, providing the basics of life at no cost. This enables many people to "live off the state" quite richly by 21st century standards.

Most civs prevent transmutation chambers from producing radioactive or extremely hazardous elements. The majority of public replicators are actually **fabricators** – they are "write-only," so as to avoid accidentally scanning in (and destroying) someone's hand.

Replicators can produce living matter, including live animals and human beings. The citizens of most civilizations are wary of scanning themselves in, as the scan destroys their body. However, for some civilizations, this is an everyday event. Almost no civilizations allow the creation of human beings "from whole cloth" (that is, the fabrication of new individuals rather than the replication of existing people). Slavery issues arise too easily.

Limitations

General-purpose replication/transmutation chambers are bulky and take up more space than the objects (or parts) that they create. Fabricating a yacht, for example, will take an hour or so and probably require some assembly. Large-scale industrial replicators can handle such jobs more easily.

Seeds are not at all reprogrammable – they are custom-built to fabricate one and only one device. They may create multiple copies, but each will be identical. Seeds also require certain types of ground to grow in, and organic matter is preferred, as it more easily gives up energy for use in the fabrication process.

Game Terms

Descriptors: None.

Effects: Transmutation beams give the Energy and near-c descriptors.

Core Tech: Nanotech and Stringtech

Entropy: Replicators require little power, but do generate noticeable amounts of heat. Transmutation requires more power and generates great amounts of waste, some of it in the form of ionizing radiation.

Mentality: Both replication and transmutation chambers are staggeringly complex devices. Their processes are typically watched by a highly-focused, almost obsessive intelligence that seeks perfection in its creations.

Starships for Stardwellers

There's nothing quite like having your very own, personal starship. While most ships in this game are settings rather than equipment (that is, you live in them rather than using them for a particular job), some relatively well-off characters could actually possess their very own starship. Here's how to handle that.

Characters who own ships will need a good reason for it. High standing in an appropriate government or defensive forces (represented by various Themes) or being a member of an appropriate Society are both good places to start.

Each ship will have its own ratings in every Capability except (typically) Biotech. Stringtech and Nanotech must be enhanced in some way. The few "grown" ships typically have cutting edge Biotech. The onboard mentalities tend to be relatively bright, with enhanced Cognitech and Metatech. They are programmed with the Spacer Profession, with a minimum of 2. Since a starship's Capabilities are effectively as useful as the character's, use the *higher* of the character's Capabilities and the ship's Capabilities (except Biotech) for the purpose of determining the character's Import (see page 11). Pay an extra point of Import if the ship is large enough that it is capable of using technologies with the Infrastructure descriptor.

All ships have some degree of digital intelligence, which allows them to be piloted by a single individual and to maintain themselves to a large extent. Many ships tend to have strong personalities, crafted so as to mesh well with the personality of the owner and/or pilot.

Minor self-repair systems are customary. Scratches and electrical blowouts can be handled via onboard replicators, but severe damage will require repairs. Costs can range from moderate to expensive with higher Capability levels requiring correspondingly skilled technicians to repair. Effecting your own repairs is possible, and reduces the cost by one level. It requires a level of 3 or higher in the Nanotech Engineer, Stringtech Engineer, Spacer, *and* Programmer Professions, not all of which need to come from the same person. Major repairs usually take about a week.

Starships with Stringtech 3+ are capable of converting matter to antimatter, and are usually fueled in this way. Those with cutting-edge Stringtech will be fitted with wormhole generators to allow interstellar travel. The energy cost of using the wormhole is entirely offset by the antimatter generator, but after transit it can take hours or days to build up a sufficient charge to reactivate the wormhole.

Battles between starships should be quite rare. Almost all of these vessels are the equivalents of limousines, sports cars, or private yachts – expensive and vulnerable. Almost none of them are built for war, regardless of the weapons and countermeasures they may employ. Imagine hanging out the top of a flashy convertible with a rocket launcher aimed at someone's limo, and you have roughly the right image. Those built as warships will find that they are not welcome in the majority of star systems, regardless of the owner's legal standing – the possibility for property damage is simply too high. If a fight does break out, use the standard conflict rules. The timescale is typically seconds, though long-distance fights can take longer.

Wormholes

Wormholes are "shortcuts" through space that allow instantaneous travel from one location to another. Characters can step through them on one planet and arrive on a different world.

Different settings in SA have different assumptions about wormholes. In some, they are impossible to create, and travel through the universe is limited by the speed of light. In others the two ends of the wormhole must be created together and "towed" into place, a centuries-long process. Such wormholes are called **paired**. In still others, the two ends can be created at a distance, allowing easier transit across the universe. These are referred to as **ranged** wormholes.

Implications

Wormholes make the universe smaller (figuratively speaking), in the same way that airline travel and satellite communication made the world smaller in the 20th century. Without wormholes, people on different planets must wait for years to communicate with each other, at great expense. Wormhole communication is still not cheap, but it is much cheaper than renting a radio telescope array.

Wormholes can be very dangerous weapons. Different parts of the universe are moving at high speed relative to each other, and wormholes must correct for this. Because of that, ranged wormholes have the potential to drop large masses on distant targets at high speed. They can also be moved, carving pieces out of buildings and dropping lava onto cities. Paired wormholes are much safer in this way, but are also less flexible in general.

All wormholes are potential time machines, though they must be intentionally set up as such (and most are not). Traveling back to before the wormhole was created is impossible. SA does not generally deal with time travel, and this is left as a "can of worms" for individual GMs to open if they so choose.

Limitations

Ranged wormholes require tremendous amounts of electricity to maintain, or they will collapse. Paired wormholes are expensive to create, but do not need to be maintained and will stay open on their own. Larger wormholes require greater energy expenditures.

Wormholes are not subtle. They can be detected with gravity sensors (Nano 3) and make a loud noise when opened. The opening of ranged wormholes can also be blocked by an *interdiction field,* which many high-tech civilizations project over their cities and military sites.

Game Terms

Descriptors: Energy

Effects: Characters with Stringtech 4 can open wormholes in certain settings, though they will need to recharge for hours or days before doing so again.

Core Tech: Stringtech

Entropy: The creation of a wormhole requires great amounts of electricity, even by high-tech standards. Tapping into the electrical mains of a large city would be sufficient. Maintaining a ranged wormhole is still a substantial endeavor, but is less expensive than creating it in the first place. Maintaining a paired wormhole requires little to no energy, especially if it is collapsed down to a pinhole when not in use.

Mentality: Wormholes are not self-balancing. Even if their energy needs are met, they can collapse if not constantly watched and adjusted. Specialized, sentient digital intelligences watch over most wormholes.

Settings

Sufficiently Advanced has a modular approach to its game world. Rather than presenting a single setting, it describes a collection of building blocks and constructs several different settings with them. To populate those settings, the GM and players will choose (or create) a set of Civilizations and Societies. Characters in the game will come from these groups. The full book includes four more settings (The Patent Office, Sublight, The Powder Keg, and The Divide), along with about 20 civilizations and societies with which to populate those worlds.

This book, to keep page count down, describes just one setting, entitled To The Stars.

Prologue

Of those who reached toward the stars, most failed. But those who succeeded, oh, such wild beauty and glory!

I am a Stardweller, and I will tell you a story. Once, long ago, there was a planet. A small blue-green dot – you probably know of it. Nestled between beautiful rings, massive storms, molten tin, and fuming acid, a single speck of life.

The people of this planet sought understanding. They were not constant with their seeking – they fought, they toiled, they hid from themselves at times – but by and large, they desired that they might one day comprehend more of the world. They looked to the stars and asked not only "Why are we here," but "Where else might we go, and how?" Through the years they passed on their insights, and their understanding grew.

There came a day when their understanding was great enough to build a transcendental intelligence: an optoelectronic mind that

Tech Details for To The Stars

This setting uses ranged rather than paired wormholes. Temporal loops can exist but are difficult to create and harder to maintain. Infosphere access is not guaranteed on many of the worlds that the typical group will visit. The Great Diaspora was about 10,000 years ago.

Inspiration

Singularity Sky by Charles Stross.
The Golden Age by John C. Wright, and its sequels (The Phoenix Exultant and The Golden Transcendence).
The movie ***GATTACA*** could fit nicely into the past of most SA settings.
The Collapsium by Wil McCarthy, and its sequels (The Wellstone, Lost in Transmission, and To Squeeze the Moon).
Dune by Frank Hebert.
Hyperion by Dan Simmons, and its sequels (Fall of Hyperion, Endymion, and Rise of Endymion).
Bloom by Wil McCarthy and ***The Diamond Age*** by Neil Stephenson are both excellent examples of what one might do with nanotech. Likewise, ***Engines of Creation*** by K. Eric Drexler
Foundation and its myriad sequels, by Asimov and others, and ***Psychohistorical Crisis*** by Donald Kingsbury.
It has been pointed out that many episodes of the original ***Star Trek*** series make for surprisingly good Sufficiently Advanced plots.
Vernor Vinge's ***A Fire Upon the Deep***. It and its companion, ***A Deepness In The Sky***, are excellent references for comprehensible non-human activity as well.
Greg Egan's ***Diaspora*** is an inspiration for dataform minds.
Ian M. Banks' ***Culture*** books were not originally an inspiration for the first edition, but the game works very well with them.
The webcomic ***A Miracle of Science***, at
http://www.project-apollo.net/mos/

could send itself messages from the future. After pleasantries had been exchanged, the women and men who built this great mind asked just that question: "Where might we go, and how?" The machine listened for the reverberations of the future, and caught the barest hints of an answer.

So we went.

We went by the tens of millions. Most of us died. The machine had precious little thought to spare, calling to itself in the future and hearing the broken echoes, and it did not imagine that we might go where we were unready to be. We stepped onto worlds like ours, on which we were still unprepared to live. Many worlds cradled our kin while they regressed technologically or culturally. Many more worlds felt our footsteps for just a few months, or heartbreaking days. We were unprepared.

Two peoples only. Out of the ten thousand and more groups who left their homes, just two civilizations blossomed and thrived: one by cutting out its own heart, one by embracing it. The Rationalists step their emotionless empire forward one tick at a time, while we Stardwellers fling ourselves far and wide through the vasty cosmos, like wildflower seeds on the wind. We still long to become more than what we were, to spread and seek, to question.

That great optoelectronic mind still lives, and others like it, endlessly circling each other in deep companionship across the ages. We have long asked them, "Where are the rest of us who came from Earth?" More recently, they noticed us long enough to answer.

Now we seek them out, our lost family, our kin.

Will you help?

Premise

Humanity is spread across the universe, but many planets have had a rough time of it. There are a great number of Cargo Cults, where a single piece of technology became a focus of worship. There are also some planets populated by Old-Worlders, who reverted (intentionally or not) to pre-technological methods as a way to save their society.

Two larger groups were more successful. The Rationalist League ("Rationalists" or "Logicians") and the Illustrious Stardwelling Armada ("Stardwellers") both seek to reconnect with these lost worlds and bring their citizens the technological wonders that they have developed.

Standard Openings and Suggested Teams

In a typical game of ***To The Stars***, you play one side or the other (or both) of a first-contact mission. In a continuing campaign the same team of characters may have the coordinates of many different worlds, and visit them to attempt diplomatic relations.

In most games it is essential to have a balance of different character types and backgrounds in order to have a successful adventuring party. That is not the case here. A diversity of Expertise and Capabilities will be useful, but the entire group can be from a single civilization without any trouble. Mixed groups are still easy to form, and still make sense within the setting.

If most of the players in your group are familiar with science fiction (especially of the more social or high-tech sort), you might want to play an enclave of Stardwellers looking to reconnect with a lost world. Players with less sci-fi experience can choose this option as well, but should be ok with a certain amount of exposition from the GM.

In a group that enjoys cyberpunk, war stories, or more traditional adventuring, you might play a group of disparate Cargo Cultists uniting to drive the Rationalist League off your planet. Cargo Cults are lower-tech, more focused, and often more warlike.

If there are some players who are new to science fiction and some who have played Sufficiently Advanced before, it may be best to create a mixed group of characters. The experienced players can play Stardwellers or Logicians, who are more familiar with technology, and the newer players can take on the roles of Old-Worlders or Cargo Cultists. This helps maintain verisimilitude and flow in the game, so that inexperienced players are not constantly both confused about the terminology and also expected to be experts in it.

Civilizations

To The Stars is a small setting, as SA settings go. There are only four civilizations: Old-Worlders, Cargo Cults, the Rationalist League, and the Stardwellers. Three of these are more properly descriptions, rather than civilizations. There are dozens of Old-Worlder planets, thousands of Cargo Cults, and millions upon millions of Stardweller worlds and ships spread across the universe. Only the Rationalists are a single unified body with a single government.

Each civilization is described in more detail later on.

Societies

If you have access to the older edition of Sufficiently Advanced, most Societies from that game will still work in this one. None of them are essential, but they make for good flavor and interesting opponents during missions.

Typical Antagonists

If the group is playing a first-contact team (whether Stardweller or mixed), other first-contact teams are likely to be the most typical opposition. They may be "friendly rivals," or they may have strongly different opinions as to how contact should be handled. They may be covert in their actions, or they may overtly attempt to "steal" the contact from your team. There are many different teams with the coordinates of new planets, and not all share the same beliefs.

If you are playing characters from the planet being contacted, you may not want outside interference – especially from the Logicians! A long-term war story could revolve around a resistance movement attempting to throw the Logicians off the planet.

How Hostile Are They?

It is important to note that the Stardwellers and the Logicians are not, by default, at war with each other. They maintain diplomatic relations, each hoping to turn the other to their way of thinking. They participate in some joint ventures. They may even serve on each others' first contact teams, though such things are unusual. However, to call them allies would be incorrect. The Stardwellers are most definitely concerned that the Logicians will reach more planets than they, and they are working hard against that. Meanwhile, the Logicians see their route to the future as the most efficient and correct. There is the potential for hostility in the future, though it is more likely to be psychohistorical maneuvering than open warfare.

Motifs

This setting showcases a few of SA's major motifs, and highlights some minor ones through the interactions of these four civilizations.

Technological Differences and Disparities. Old-Worlders are unenhanced. Cargo cultists are often enhanced in just one way. The Logicians are brilliant but socially stunted. Stardwellers have all of the tech in the universe at their fingertips. Each type of character is viable in the same group. There will be a stark contrast between the immortal Stardweller civilization and Old-Worlders who have forgotten crop rotation. Such differences, and how the team chooses to handle them, are at the core of To The Stars.

Presumption. The Stardwellers and Logicians both often presume that their technology allows them to live better lives. Not all planets will agree. What then? Will the team respect their wishes and allow disease, old age, hunger, and scarcity to run rampant? Or will they seek to release new technologies regardless? This leads to...

The Impact of Technology. What will happen to these worlds? The change from an Amish lifestyle to an immortal society with replicators is typically not a smooth one. How will their world change?

Human differences, and the diversity of humanity. Some of the human characters in this game are likely to seem highly nonhuman. Between strange neuroforms, digital intelligences, unusual cultural traditions, and more, it is likely that each group will deal with a certain amount of culture shock. The Stardwellers pride themselves on such diversity.

Human commonalities. Some things are truly universal, and can unite any characters. Even the Logicians have some instincts left, and digital intelligences originated with humanity as well. The desire for acceptance and survival are universal.

The omnipresence of digital intelligences. Among the Stardwellers and Logicians, digital intelligences are everywhere. They live in many devices, they watch over the most complicated technologies, but they also participate in civilization like any other person. Cargo Cultists are likely to be very confused by seeing people treat computers like human beings.

Fighting for Belief. The disparity between the Logicians and Stardwellers, both psychological and physiological, is entirely the result of acting on their beliefs.

The Stardwellers are Sci-Fi. It's like a geek dream checklist. Alien-looking people. Intelligent computers. Starships. Body-swapping. Wormhole generators. The Stardwellers in this setting are still descendant from sci-fi geeks, the same way they were in the original SA, and it shows.

They Seem Different...

The civilizations listed here are slightly different than they were portrayed in the previous edition, and also different from the way that they are portrayed in the main rulebook. They even have different civilization benefits and capability ratings. We encourage you to tailor civilizations to the settings that you create, and we're setting the example right here.

The Illustrious Stardwelling Armada

The Stardwellers are a culture at the farthest edges of humanity. They constantly alter their bodies, minds, and social structures, forever seeking new forms of life and activity. To speak of the "average" Stardweller's body or mind is meaningless.

The Stardwellers are bound together by their love for outer space. Some of them have never set foot on a planet. The Stardwellers are the only civilization that really builds and uses starships – others use wormholes from planet to planet, or from planetside to deep space if it becomes necessary. The Stardwellers have genuine, wormhole-driven, inversion-powered starships, replicated with care from asteroid belts and cometary debris. The ships range from auto-piloted two-passenger shuttles to ten-mile-long cylinder-and-ring behemoths.

Stranger designs can be seen, too – nano-thin self-repairing translucent bubbles with gravatic grapple drives. Well-armored "walkers" whose nanowire legs extend and retract to pull themselves between ships in a fleet. Liquid water habitats inside a comet-like icy shell. Genetically fabricated beings with space for human beings inside (or sometimes outside, clinging on like oversized remoras). There are even, for the sheer jest of it, quarter-mile-wide "flying saucers" designed to skip off atmospheres like a stone skipping on a lake.

Once you're inside the ship (or planetside for those Stardwellers who live on the ground) things become even stranger and more otherworldly. A Stardweller group visiting 20th century Earth could be mistaken for an entire alliance of alien species. Skin tone is merely the beginning: different body forms such as quadrupedal or octopoidal; new varieties of sensory organs; exoskeletons; gills and fins; spinnerets; pheromones; symbiotic organisms; one-way respiratory systems; and thousands of less-obvious alterations can be found everywhere. Zero-g gives them more opportunity to experiment with different forms – threefold or higher symmetries, jellyfish-like tendrils, rubbery skins to protect from impact, vacuum-capable bodies, photosynthetic fronds, these and more are not just accepted, they are genuinely common. Stardwellers thrive on diversity. They weave biotech and nanotech together into a single cohesive whole.

Mental alterations are common as well, with group-minds, cross-linked hemispheres, and neural meshes contributing the majority of changes. Because most biotech alterations pass through to one's children, it is a rare Stardweller indeed who shows no variations from the basic human form, even if the alterations are merely cosmetic.

Stardweller culture is one of interleaving reliance. The Stardwellers acknowledge and protect the idea that their civilization is interconnected in much the same way as an ecosystem or a planetary economy. No one part works independently of the others. Respecting others for their own abilities is one of the psychohistorical foundations of the Diversity core value.

Despite the name Armada, the Stardwellers are not organized militarily. Each individual group has its own organization, with various standards helping them interact with each other. Stardweller government is often exceptionally confusing to outsiders. The Stardweller economy is as patchwork as its government. Peer recognition is more important to most Stardwellers than cash, especially since the civilization takes great care to ensure that the basics of life are available to all. Unfortunately, this does lead to those who are, for whatever reason, unable to receive recognition becoming rather

angry and disaffected. The underside of Stardweller society isn't economic – it's social and emotional.

Most Stardwellers make heavy use of technology in their daily lives. Meshes are common, dermal microbots can be assumed for every citizen, and children are trained in high-level social techniques. Over half of the people that call themselves Stardwellers are digital intelligences. The Armada's citizens have the highest average level of technology in the universe.

Common Name: Stardwellers
Emblem: A star, yellow, for our ancient home. Its eight points resemble the compass rose, because we navigate the universe and the future. In the background, two colliding galaxies, with centers of new starbirth, representing the potent effects of melding ideas.
Names: Stardwellers typically use invented or descriptive names rather than traditional Earther names.
Capabilities: All capabilities max out at 4.
Benefit: Stardwellers receive an extra Twist each game, which must be used through the Wonder Theme.
Core Values: Freedom and Diversity

Freedom does not refer to physical freedom, but rather to ideological freedom. It helps Stardwellers resist any attempt to remove what they see as basic rights, and lets them argue more effectively against restrictions that might be put on their actions or selves. Arguing with a Stardweller over the merits of restricted research, caste-style societies, indentured servitude, or similar ideological restrictions is an exercise in futility.

Diversity argues that no individuals or groups should be excluded or marginalized because of their differences. Stardwellers who see bigotry or intolerance are unlikely to merely ignore the situation. Stardweller society strives to make room for all different types.

The Rationalist League

The Rationalist League began as a social experiment in the latter days of industrialized Earth. What would a society without emotion be like? Would it function more efficiently? Would the people appreciate their state? With genetic scalpels, a group of sociologists and geneticists carefully removed all of the emotion-inducing glands from a generation of children, suppressed the emotional parts of their mind and heightened the rational, and then secluded them with little knowledge of the outside world. About a thousand embryos were genetically altered before birth, and further surgical adjustments were made to the children throughout their early lives, all with the goal of eradicating emotion from the human mind. In later generations the process was improved, made safer, more efficient, less dependent on surgery. Youngsters were now aided by the hundreds upon hundreds of those who had already seen the benefits of the procedure.

Naturally there were some drawbacks and difficulties, and not every child made it to adulthood. Nevertheless, the early League persevered. Some hundred years later, when the Transcendentals appeared and wormhole travel became possible, the Rationalist League was one of the first groups to request passage off-world. Over ten thousand of them were ready to leave, and in fact, they'd been planning on leaving for quite a while – the appearance of the Transcendentals simply meant they didn't have to build their own starships.

Expanding quickly but not aggressively, the Rationalist League built a literal interstellar empire on inhabitable planets throughout the Milky Way. There is no internal struggle in the League, no divisive emotional conflict, and no crime. They also have little art, wear purely utilitarian clothing, and form no real family structures. Children are disciplined and raised by whomever nearby is capable of doing so. Needless to say, the Logicians have serious trouble understanding anyone from outside the League, and vice versa. Improvements in genetic engineering have allowed them to remove emotion from themselves entirely.

The Logicians are organized as a constitutional monarchy, for the sake of sheer efficiency. Those with a loftier position in the hierarchy have more effective mental enhancements, and those of lower position know it, thus making them more likely to trust their superiors. Citizens have little voice, but since everyone can agree with the leader's logical stance, most people don't see a need for one. The "rank and file" of the Logicians have a good standard of living, but work much as the serfs of feudal Europe did: without reward, without recognition, and without much concern for these things. While to others the Logicians' way of life seems stifling and heartless, to them it is the epitome of how life should be lived: in service to those who know better.

Describing the lifestyle of the Rationalist League is difficult. One cannot say that the people are grateful for how they live, though one could say they are thankful for the peace and unity of their people. You cannot describe them as hostile to other cultures, or pitious of them, though they do think that others might be more understandable (and more able to understand each other) if everyone were a Logician. Saying that a Logician "feels" or "believes" or "hopes" anything isn't quite right, and it's hard to avoid because such phrases are ingrained in our language. If all Logicians seem to think alike, that's because they do – Rationalists can agree as to what they think, because logic is the only thing that dictates their actions.

The Logicians are emotionless, but not entirely without feeling. They can feel pain, pleasure, discomfort, and distraction. They can feel mentally fatigued or refreshed. They can be overwhelmed with sensation. Though they cannot truly feel fear, they can be fooled into thinking that the odds against them are overwhelming, and that they should retreat or surrender. They occasionally have holidays to remind themselves of past events, because not all of them have perfect memories yet, but they do not celebrate or mourn. Logicians do still have a survival instinct, or they would not survive their first few years (nor, in all likelihood, their later ones).

The Rationalist League's long-term objective and their Efficiency Core Value come from a synthesis of their survival instinct and an understanding of reciprocation. The goal of the Logicians is to eradicate all emotion, or, failing that, to make it controllable and subservient to rational thought.

Their rationale for all this is that logical thought, properly carried out, reduces conflict and encourages efficiency. Psychohistorical calculations verify this. Efficient processes minimize increases in entropy, allowing the League to exist farther and farther into the future. By respecting their descendents' survival rights, they encourage those future generations to respect the survival rights of those alive now. After all, information transfer to the past is a fact in this universe, and no one wants to be sabotaged by one's descendents for a foolish mistake.

One of the League's secret weapons is an offshoot theory of psychohistory that allows near-perfect predictions within the League, as part of psychohistory's probabilistic nature comes from the presence of emotional factors. This theory effectively acts as a metatech "sensor," letting the monarchy know about even the slightest disturbance in their plans, the day it happens. The Logicians' metatech offense may be pathetic, but their defenses are effective and efficient.

Common Name: Logicians

Emblem: A flag, one half black, the other white. The story that is told about this is that the Stardwellers required each group at the Grand Convention to register a symbol, and the Logicians had none when they arrived. After a moment of consideration their ambassador drew this figure, and it has been used ever since.

Names: The Logicians often have names taken from the Indian subcontinent, where their social experiment originated.

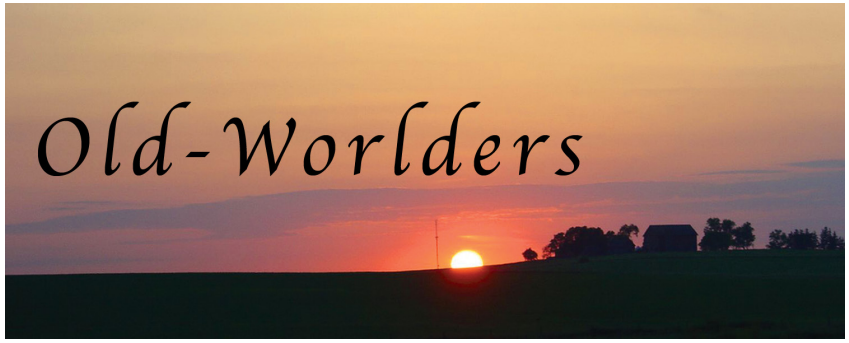
Capabilities: Logicians can have any Capability except Metatech rated up to 3, and Stringtech up to 4. Metatech is limited to 0.

Benefit: Logicians are immune to emotional appeals. They are also immune to any direct use of the Romance, Terror, and Wonder Themes.

Core Values: Logic and Efficiency

Logic allows citizens of the Rationalist League to avoid any attempts to persuade them which rely on intuition, illogical arguments, or emotion.

Efficiency helps the Logicians design less wasteful processes and devices, and also lets them resist metatech coercion that would push them towards using such things.



When the fringes of Earth culture left through the wormholes, and the mainstream "world powers" slowly strangled each other to death in the aftermath, Earth was left a very quiet and empty place. As it turns out, some people had been quietly hoping for this for years, and didn't mind putting down a little extra farmland where high-tech structures had once been built.

Contrary to popular belief, however, not all Old-Worlder cultures are on Earth, and not all of them are really that old. The Amish are the stereotypical Old-Worlder culture, and they do still live on Earth, but some groups traveled to other planets to live their lives in rustic peace. Others went to new worlds with all the technology they could get their hands on, and failed in the attempt. Rather than an accidental and messy decline into a cargo cult, these groups specifically chose an Old-Worlder route, seeing it as a better option. Some of these groups would be glad to return to a technological lifestyle; others have come to see it as unnecessary and overly complicated. There are about ten Old-Worlder cultures left on Earth, in the areas that haven't been quietly turned into museums or monuments by other civilizations. There may be dozens more on other planets.

Many people from other civilizations see Old-Worlders as not just simple, but stupid. They don't wear meshes, they don't have dermal 'bots, they haven't had any memetic training at all, and they have trouble operating nearly everything in a high-tech civilization.

What's worse, the reverse is not true – those with meshes will survive just fine in an Old-Worlder culture, as long as they have the right programs running. Many people who interact briefly with an Old-Worlder come away with a feeling of superiority, or of pity for the "backwards" people who have chosen technological isolation.

Those who spend a few months with them start feeling differently. The strength of Old-Worlder civilization is in its values, in the strength of its convictions and the pure, uncomplicated lives the people lead. They know they could have whatever technology they like, but it's not what they want. They trade a little with the outside world – usually handcrafted furniture or the like, in exchange for some political considerations – but it's not a vital part of their lives. What's important to them is peace and a simple life. When outsiders come by, it's not easy to see the benefits of those things right away.

Their government is primarily on a town level, and often consists of an elected council or circle of elders. Economics may be through barter, though money (coin or paper) is also common enough.

Common Name: Old-Worlders
Emblem: The Old-Worlders have no general emblems, as they rarely have need for them.
Capabilities: Old-Worlder characters have a maximum Capability rating of 0 in all scores.
Names: The more traditional, the better. The Old Testament is a good place to look, as is the Three Kingdoms Romance.
Benefit: Old-Worlders may pick an additional Core Value of their choice (giving them a total of five). It may be an ideal, a person, a place, or a cause. "Worship" or a similar religious belief are common choices.
Core Values: Tradition, Simplicity, and one other of the player's choice (see above). Old-Worlders tend to hold onto their beliefs more strongly than most other cultures.

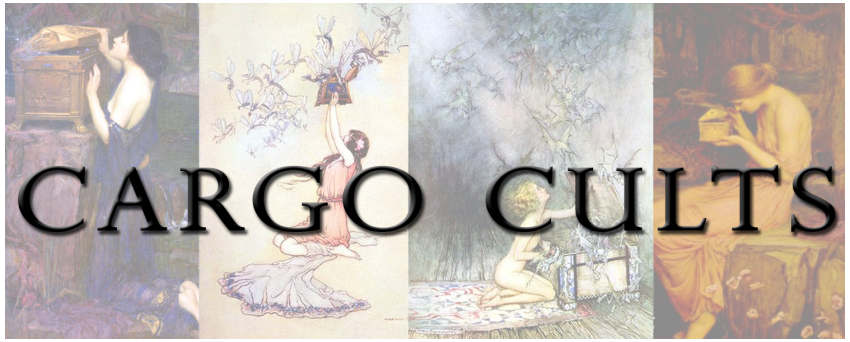
The primary purpose of Tradition is to hold Old-Worlder communes together, giving citizens bonuses to actions that keep their lifestyle intact – such as fighting off civilization-wide metatech assaults, convincing other citizens to keep to their traditions, and the like. Tradition doesn't say that any specific tradition is important; rather, it is important to have traditions and to hold to them. It says that all traditions have worth and value, that they are what bring people together. Admittedly, most old-worlders tend to think that their traditions are better, or at least healthier for the soul, than those of outsiders.

Simplicity is what keeps Old-Worlder technology low, but it also helps them cut through lies and nonsense and refuse to be manipulated by complex schemes.

A Word About Aliens

Sufficiently Advanced is, in general, the story of humanity in all its myriad shapes and forms. To a lesser extent, it is the story of what humanity creates (i.e. digital intelligences). It is not, on the whole, a story about intelligent aliens. The full rulebook describes a few, all of who are really and truly alien, and essentially unplayable.

If you want to introduce alien species, we recommend making them as bizarre and... well, alien... as you possibly can. Humanity may have no special place in the universe, but adding a playable alien species would subtract some of the inherent weirdness of the various human cultures.



Not all of the cultures who went through the wormholes went on to successfully form full civilizations. Some, the lucky ones, lost nearly everything, and became Old-Worlders. Others suffered from a dearth of scientists and engineers, and lost all but one or two very advanced pieces – solar-powered stringtech and nanotech are common, as are the occasional hereditary biotech enhancements. They lost the knowledge of how to maintain their other technology, and regressed into a merely ritualistic understanding of what they had left. When they were rediscovered, these groups were collectively termed "Cargo Cults," after an old phenomenon from Earth.

Cargo cult religions are almost invariably based around their surviving technology, though this is not always noticeable. For instance, one group might have self-repairing public utilities, controlled by computer. While the computer's main power source has failed, it still draws solar energy from cells on the rooftops. The cult therefore worships the sun. Too long without it, and water stops flowing, the remnants of the infosphere fall into disarray, traffic grinds to a half, and the cities generally goes haywire. It should be noted that this would be a very fortunate Cargo Cult indeed, as most surviving pieces of tech do not provide their own infrastructure.

Psychohistory has trouble with the Cargo Cults. Each one must be treated separately, and none of them are large. They also show an additional instability not normally seen in cultures with two Core Values. Three explanations have been proposed: First, there may be an error in the way most people are creating or interpreting predictions of the Cults. Second, there may be unmeasured or unentered data that makes the cults act differently than expected. Third, there is the possibility that psychohistory itself has some sort of blind spot when it comes to these sorts of cultures, and needs substantial revision in order to treat them properly.

Whereas Old-Worlders are typically seen as wise but not necessarily intelligent, Cargo Cultists are seen as bright but foolish. Cultists removed from their homes and brought into the larger universe will often be seen as curios, and potentially unbalanced individuals.

The Cargo Cults have no other unifying factors or government. The term is a catch-all. Some sample Cults can be found below.

Common Name: Cargo Cults
Emblem: The symbol of the Cargo Cults is Pandora's Box, though most of them who learn that are not particularly pleased.
Names: Typically based on one or another culture from Earth. Typical names in the cult can give a hint as to its historical origins.
Capabilities: Cargo Cults have one or two Capabilities that can be rated as high as 2. The rest are typically 0.
Benefit: Cargo Cultists have a competitive advantage with their cult's primary Capability. They've learned how to eke every bit of effectiveness out of that one remaining technology.
Core Values: Cargo Cults have many and varied Core Values. Two of the more common are Ritual and Worship, but you should feel free to replace these with others that are more appropriate to the sort of cult you wish to portray.

Ritual is more a handicap than a blessing. While it allows Cargo Cultists to keep some of their cultural identity when they leave, it also forces them to keep to the ceremonial trappings that surround their technology. Many find it difficult to give up methods that they grew up

using, even when faced with evidence that those methods are overly lengthy, useless, or even counterproductive. Its main beneficial use is to give the cultists bonuses when using the technology they're familiar with. This applies to all uses of a Cargo Cult's primary technology, as long as they're able to complete their ritual.

The exact focus of Worship varies from cult to cult. Outsiders aren't expected to believe in the cult's gods, unless they're visitors to the cult's planet – at which point they better act like they believe, lest the gods take away technology! It is very difficult to convince most cultists that their religion is based around a massive misunderstanding, and that their creation myths are nothing more than warped accounts of the Second Diaspora. Players should come up with a few religious beliefs and behaviors for their character, and stick by them to the extent their CV requires.

Sample Cargo Cults

Because Cargo Cults make up the majority of inhabited planets (though not the majority of the population), we include a few examples here for those who wish to play characters from them, and for GMs who need a good place to send their Inspectors this week.

The land of ***Greenstar*** is ruled by biotech-enhanced nobility, who are seen as being blessed by the gods. They have ruled for thousands of years, through all manner of horrible natural disasters that wrack the planet. The world's technology is roughly at the level of medieval Europe, and much of the social structure is that way as well – feudal relationships, oaths of loyalty, strategic marriages (to "enhance the blood" of the nobles), and so forth. There are stories of how the nobles "fell from the stars," but the commoners would be stunned to realize that they, too, came from another planet.

The ***Sun-Circlers*** and the ***Actualists*** unhappily share a single planet (not unusual among longer-lived cults). The Sun-Circlers (correctly) believe that the planet circles its sun, while the Actualists believe that everything outside the planet is an illusion. Both sides are almost religiously capitalist, and many of them have the Property CV. These cults are relatively well-equipped in terms of general technology, having come back from several previous "crashes," but the religion of the Actualists means that any space-related technology (such as telescopes) could be the target of a holy war. Cybernetic enhancement is common, and there are "wild" microbots that act as parasites on the people who live there, filling some of the same roles as dermal microbots do in the rest of the universe. The pregenerated character Astina (see page 11) is from the Sun-Circlers.

The world of ***Fu Jing*** is probably one of the most orderly of the Cargo Cults. Here a solar-powered, self-repairing infosphere still operates, though very unreliably. Display devices on the surface of the planet can interface with satellites, which run psychohistorical predictions on the world's inhabitants. Accessing these predictions requires a process similar to casting the I Ching, with similar interpretations – the original colonists' mnemonic for remembering various predictions. The current inhabitants have trouble interpreting all this at times, but they understand its value and have a great amount of control over the flow of their world's society.

Onubu is a world where the inhabitants tried to be Old-Worlders, but then regressed significantly in terms of their technology. They are stuck in the stone age, with almost no heavy metals and no fossil fuels available on their planet. Their society remains quite sophisticated, however: certain citizens learn "ancient" metatech techniques, passed on through secret societies. These societies are at war with each other, each trying to eradicate the others while remaining hidden. Their techniques let them hypnotize others quickly, start or quell riots, and generally shepherd the rest of their tiny civilization.

New Earth (one of many) holds a crash-and-burn civilization. The current cultists are hiding from and occasionally worshipping the warbots that were built by a previous incarnation of the same cult. The planet holds evidence of many crashes in the past, some of a very devastating nature.

Wantannala is nearly covered with an extensive fungal nanophage with an animal-level intelligence. The land masses that it does not cover, typically inhospitable, are inhabited by terrified natives that treat the bloom as a god. Their lands are used as a dumping ground for what the phage either can't use or is saving for later, and thus their lord giveth and taketh away almost all the resources these people have.

Shambala is the result of a failed attempt to create a fantasy world. There are massive fairy-tale castles and swords that glow and sing, and these things work fine. There are also rampaging dragons, feral unicorns, glowing talking skull-lights, and infectious nanophages that empower the unfortunates they touch with demonic-looking limbs of great strength and sharpness.

Podur would be an unremarkable world, quite similar to 20th century Eastern Europe. However, an ancient ammunition dump has recently been unearthed, along with evidence that humanity came from far away indeed. What they do next will determine whether Inspectors find a world on the brink of war, or a smouldering wreck.

Zvezda'dom was originally a Russian world that lost touch with the motherland during the Nanotech Wars on Earth. Although its technology stalled, this cult is nonetheless one of the more advanced in the universe. The tech is what one might call "cyberpunk," with mobsters forming an oppressive kleptocracy

Ganja is a "Rastafari" world with moderate metatech knowledge and an extensive biotechnology infrastructure, a significant percentage of which is focused around drugs and medicines. The culture is only skin-deep, however; any connection to religious doctrine and the original ideas of Zion and Babyon are gone, replaced by a cobbled-together belief system that serves primarily to validate extensive drug use. The civilization regularly undergoes upheavals and crashes every hundred years or so, but seems to be "chaotically stable" in a bizarre way, quickly returning to normal.

On **Taqatka**, only a single replicator remains. Self-repairing and powered by a geothermal tap, it gives the planet's high king nearly godlike power over his rivals. None of the cultists remember any high-tech devices, so the replicator's mentality stumbles through its translations of the kings' requests for magical devices with which to smite his rival kings and dominate the planet.

How they see each other

Stardwellers are often seen as a strange mix of the familiar and the bizarre. They can be intense, flighty, impressive, and stuck-up. Others often see them has having a mixed morality.

The Logicians are viewed as being nearly alien in their mindset. They are seen as clearly intelligent, but also somewhat unfortunate.

Cargo Cultists are seen as primitive curios. People will often give them a wide berth because they may be mentally unbalanced.

Old-Worlders are viewed partly with reverence, partly with pity for their adherence to ancient ways. They will typically be considered unpolished in wider society.

Advice

The best advice for playing Sufficiently Advanced comes from some GMs and players who have done it themselves. Here are some choice pieces of advice from veterans. Each paragraph comes from a different person.

For GMs

Sufficiently Advanced is a game that eats plot. Compared to other games, a few well placed Twists and the intelligent application of godlike abilities can let the players chew through two or three sessions worth of plot in about five hours. Moreover, with Twists, players can change the plot, excising whole chapters of the story and replacing them with new, different chapters.

Whatever you do, don't fall in love with your plot. Some GMs like mystery-heavy games, some combat-heavy, some politics-heavy, and so on. If the players don't want to play that game, they'll spend a Twist or two, and the untenable mystery is solved, the impossible combat resolved, and the convoluted politics untangled. You're going to be playing the kind of game the players are interested in for 90% of the time. Roll with it. Make new plots and new stories. And hold onto the ideas of the old ones, since even a Twist used without Complications creates some plot.

The most important information you can have for an NPC is their Core Values. NPCs don't get Twists, and you can guess their Capabilities from their society and their Professions from their actual profession. Any time you make an NPC which will have more than one interaction with the players, you should pick at least one Core Value to help define her. Its a really quick way to give an NPC depth of character.

I strongly recommend collecting Twists as often as possible. In my mind, the quality of a session can often be judged by the number of Twists spent. To make it even more visceral, I give each player a physical representation of their Twist, literally collecting them (and keeping them in a pile in front of me) over the session.

Once you have that truly memorable character or planet, give it a really good death scene. If the players save it – which, given Twists, can happen no matter what you plan – they'll really appreciate their success. If they can't, they'll really feel the loss. Either way, plot!

For Players

Don't fear Complications! Their purpose is to enhance your enjoyment of the game, not to detract from it. Think about it: for the cost of one Twist, you get to change the plot to suit you twice! Sure, you may be screwing your characters over, but in the words of Kurt Vonnegut: "Be a sadist. No matter how sweet and innocent your leading characters, make awful things happen to them – in order that the reader may see what they are made of."

Make sure you're at the very least bending the laws of physics. Don't let the basic laws that determine how the universe works get in your way. Bend them. Twist them. Pervert them. When you're done with that, come up with an explanation on why you should get away with it that uses big words and probably time travel. It'll be more fun that way. Sure, sci-fi needs to make at least some sense, but never forget the fiction part. Make science your straight man and play as many witty tricks on him as you can think of. The universe of S.A. can only be simple if you allow it.

When building your character, don't tailor your character to the types of situations you think you'll be in, because you'll be in a thousand different kinds of situations. Tailor your character to what you feel like playing/acting like.

The Complete Book

Sufficiency is a complete, playable game on its own. However, it's as stripped-down as we could make it, to keep the page count low and keep printed copies inexpensive.

The full version of Sufficiently Advanced 2nd Edition has much more content. There are about 20 civilizations and 25 societies, with four more settings in which to use them. There are copious examples of play. The technology list is over five times as long, and the advice section covers many new and different topics. Finally, the book is also beautiful, full-color artwork. SA2 is over 230 pages of high-tech goodness, and we're not even done writing it yet.

As of this printing we're hoping to have the book ready for Genericon XXVII, in 2014. There is still writing to be done, art to be created, and playtesting to be done. There's no guarantee it will be ready, but we're going to push for it.

In the meantime, if you'd like to check out the 1st edition, to see some of these civilizations and societies in their older forms, you can get the entire book free on 1KM1KT:
http://www.1km1kt.net/rpg/sufficiently-advanced

There are also print copies available on Lulu.com.

Final Notes

Sufficiency, Beta version #3, first downloadable version.

This version of SA was created on a Macintosh computer using Adobe InDesign. It uses the fonts Optima, Copperplate, and CHARLEMAGNE. The cover was made in Pixelmator and was inspired by work by Daniel Solis.

All astronomy photographs are courtesy of NASA. The barn and sunset photo for the Old-Worlders is licensed CC-BY-2.5 by Flickr user "felttippin". Stock art for the cover came from iStockPhoto.com. Tech brushes are by Zane Bien, at http://z-design.deviantart.com/

Arthur C. Clarke has nothing to do with this game, and in all likelyhood never knew of its existence. But we like his work, and we hope he would have liked ours as well.

Thank you to those who continue to support this game! If you'd like to see more SA material, check out the forums at
http://suffadv.wikidot.com/

--Colin Fredericks, February 17th 2013