

# Men Like Gods

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# Chapter 1

## Setting

### The Apocalypse

Since the time of H. G. Wells and Olaf Stapledon, some prophets have envisioned new technologies that would transform the world beyond recognition. At the start of the twenty-first century, not one but three such technologies matured simultaneously: cognitive science, genetic engineering, and nanotechnology. Not one person in a thousand suspected the magnitude of the changes in store for them. Of those who saw, few realized that anyone who controlled all three technologies would become like gods. And of those, fewer still recalled that of all the taboos and abominations proscribed by religions throughout the world, there is nothing a god hates so much as competition.

While the world rolled on in blissful ignorance, those few thousands struggled silently to be the first to master the new knowledge. The world was taken completely by surprise when the conflict broke out into open war. Monstrous, mindless soldier-beasts fought diamond-plated robots and nanite swarms that parted like mist when struck. Some viruses devastated entire races, while others were carried harmlessly from host to host until they reached their sole victim. Giant brains that filled entire buildings continually invented more devastating applications of their knowledge.

The men who would be gods ignored humanity as they fought their Olympian battles. But mankind was not yet through. Humans killed the monsters and starved the robots of their energy sources. For all their power and intelligence, the Ubermen could not coordinate their many eyes and arms in the world, and people stomped them out through sheer numbers and the grace of God. At least, this is the Church's story. Some heretics claim the world was saved by other Ubermen for unknown reasons. Others claim the Ubermen never fought against humanity at all; we were simply caught in the crossfire, and the Ubermen killed each other or moved on.

Humanity won without losing more than half its number. But once-fertile fields had been devastated or used as raw materials by the Ubermen, and transportation lines had been destroyed. Most survivors starved the next winter. Leftover bacterial agents killed many of those left. No one knows how many are left. The United States has perhaps ten million people; but then, it may have been hit disproportionately. If there are any Ubermen left, they are in hiding.

### Rebirth

During the Cultural Rebirth, scientists and technicians were hunted and killed. The rage of the people was great, and they were not prone to make fine distinctions of guilt and innocence. A person might be lynched for wearing glasses. People burnt libraries and smashed computers, destroying

anything that reminded them of their technological nightmares.

The quest for scientific truth was deemed too dangerous for man, and under the guidance of the Inquisition and the Church humanity learned to accept firm boundaries on its proper place in the natural order.

Once their enemies were dead, the Inquisition relaxed somewhat, even to the point of reinstating oral public schooling. But information is hard to kill. The pieces are still out there. And sooner or later, someone is going to put them together.

## Society

During the Rebirth, governments were founded by warlords; they naturally developed a feudal system. There are differences between the present and the middle ages: there are newspapers and stock markets, for instance, and medicine is more advanced. But slow communication and scarcity of money naturally encourage strict hierarchical organization. Few economies of scale remain, so most businesses are too small to take part in the stock market. Few farmers have the resources to stay independent through bad seasons, so they work for rich lords.

People in the cities have more independence than those in the country, but less stability. They cling to the old buildings, better built than any could be today, but the plumbing and electricity no longer work. The old cities were not meant for primitive life: there is no earth to dig outhouses in, and no surface water for wells. People live around the edges, but the downtown areas are broken ghost towns, hollow cores.

There is no electricity and no plastic; there is some oil and rubber. Mass production is crude since machines cannot be built capable of tooling precise, interchangeable parts. Hand manufacture is inefficient, hence a laborer's work isn't worth very much, hence he isn't paid much. Men are better at physical labor than women, so the traditional roles of men as breadwinners and women as mothers have returned, along with the prejudices they inspire.

The people are ignorant and superstitious. To them, the world is a fearful and mysterious place, a battleground for invisible wars between demons and angels with their souls as the prize. They cannot understand the difference between science and magic. How could they, when the Inquisition tells them Ubermen are demon-possessed? Villagers may hang mirrors behind their doors, paint red lines around their doors, put up crucifixes, or wear garlic to keep away Ubermen.

This manual describes the Western world and the Americas. The situation in Africa and Asia is vastly different.

Certain types of old technology, such as automobiles and guns, are permitted if they are original, pre-Apocalypse, but new ones may not (and cannot) be manufactured. This ensures that only the wealthy can afford them. Old technology represents power. Even if an ordinary merchant owned a car bigger than the Cardinal's, he would not dare drive it. The Inquisition controls the manufacture of ammunition.

The Pacific Northwest and central Canada are democratic. The Plains states are slave colonies, where serfs grow crops for powerful lords on the east and west coasts. New York City has an illegal but thriving slave trade with Africa — this time in the other direction.

## The Cities

The cities were hit hard by the Apocalypse and the Cultural Rebirth. The battles between the Ubermen often took place near sources of energy, computing power and raw materials, and many

used cities as convenient resources regardless of their inhabitants when cornered. Some re-routed all electricity and communications to themselves. Others used nanotechnology to transform buildings or people into building materials for their own use. Thousands of people were eaten by unseen machines and remade into tools or weapons. Others attacked enemy positions with clouds of hunter-killer animats, viruses, chemical weapons, or goo. To this day many cities are wastelands of warped silicon and diamond.

Anarchy during the Rebirth caused more damage than did the Ubermen. Buildings were burned, warehouses looted, and transports hijacked. When the fear and confusion turned to rage, the mobs tried to destroy everything they linked with technology. In the end most people left the cities.

However, many things still draw people to the cities. Some seek freedom from the rural feudal lords, although the lords of the cities are often equally ruthless. Others want to return to the old times, or at least see the wonders. And most come for the wealth. Although man and time have destroyed much, many valuable goods still lie buried in the ruins. The days of the scavenger barons are long past, when the rulers of the cities grew fat exporting luxuries and tools to the country. Today their descendants sell raw materials, like glass, metals (especially aluminum, which cannot be produced anymore) and plastics.

Most live in the first two or three floors, since the elevators lie dead. In some areas water still runs, since the old pipes sloped downwards from the reservoirs. They are leaky, and often polluted. Here and there simple aqueducts provide a better source. Former gardens and parks now grow vegetables.

Large areas are completely uninhabited except for the birds and plants living among the silent skyscrapers and crumbling streets. The city dwellers are used to the sight, but many awed onlookers return home convinced that God has forgotten them. Most of the easily accessible materials and objects were looted long ago, and what remains is hard or dangerous to reach. Some streets have been cleared out, and serve as thoroughfares for carriages. Horse-drawn wagons traverse old railway tracks, which are repaired using wood or tracks from unused lines. These horse-drawn railways often connect distant country villages to the cities.

Some Inquisitors see the cities as potential hotbeds of heresy and dissent. They pay scavengers who bring them impure or heretical texts or objects, not to mention technology, so they can be properly destroyed. Many objects too dangerous or useful to be destroyed lie hidden in the vaults of the Inquisition.

## **New York City**

Southern Manhattan is not unlike Rome around the year 1000, a small community living in the ruins of fallen giants. Still, it is one of the most populous cities of the East Coast, with more than 25,000 inhabitants. It is one of the few cosmopolitan cities of this age. The city ranges from the busy merchant quarters along the waterfront and around Wall Street to the quiet farms and residences in Central Park or the fishing villages on Long Island.

After the Apocalypse, chaos continued for many years, as the warlords entrenched their positions and employed armies of scavengers to fund their wars. In the end, their resources dwindling, the warlords made uneasy peace and divided the city into domains. The Church moved in and blessed their supporters as nobility. Through a series of diplomatic manipulations and marriage between noble families, the Church has brought peace and prosperity to most of the city.

The city trades raw materials, scavenged rarities, and illegal slaves for foreign goods. It is one of the few places where one can buy European products, although the Church regulates these

expensive rarities. Several merchant houses rival the nobility in power. Goods come in by sea or over land. The local nobility protects travellers who pay their tolls from pirates and robbers. Many seamen pray to the huge statue of Mary in the harbor for safe passage.

New York is one of the few places on the East Coast with overseas commerce, and this has prompted the Church to place much of their authority here to stem foreign heresies before they appear, and to keep track of what is actually sold and done. The main administrative building is the south tower of the World Trade Centre. In a grandiose display of the power of the Church, the building is actually lit with electricity. At night it shines with an unearthly light, and it has been renamed the Pillar of Light. Locals believe that the Inquisition uses the north tower as a prison. They call it the Pillar of Darkness.

## The Inquisition

The Republic has no need of learned men.

— Jean Baptiste Coffinhal, French revolutionary (1794),  
in reply to Lavoisier's request for a two weeks'  
stay of execution to finish his last experiment

The Inquisition's primary task is to prevent the technology that precipitated the Apocalypse from being rediscovered. It also fights heresy. The Inquisition crosses all boundaries. Rulers who do not cooperate with them soon find themselves the objects of holy crusades.

The Inquisition also is responsible for suppressing dangerous thoughts. Specifically, the idea that humans can be improved is heresy. Medicine is solely to cure the sick, not to improve health beyond normal.

All Inquisitors claim the authority of the Inquisition. Since the Inquisition calls on everyone to expose illegal use of technology, technically everyone is so authorized. In urban areas, the Inquisition is well-organized and responsible to the central authority in Austin, Texas, and (in theory) to Geneva. In rural areas they may be simple local brigands. Mobs can and do commit shocking acts in the name of the Inquisition, and anyone who protests will probably be the next traitor. Only city guards or private bodyguards dare oppose them.

Sometimes, rather than fighting Ubermen directly, the Inquisition will play them off against each other, especially when they are paranoid or too powerful for the Inquisition to touch.

## The Church

He that increaseth knowledge, increaseth sorrow.

— Ecclesiastes

Every respectable person belongs to the Church. The testimony of non-Christians is not admitted in court, and their legal rights are not clear. Those who fail to attend Mass twice a week may be excommunicated.

The Church claims to be the true Catholic church that Christ initially entrusted to St. Peter, but this claim must be taken on faith. No one knows what the connections are, if any, between the pre-Apocalypse Catholic church and the Church today. The Rebirth left little documentation. Most old books of Catholic doctrine have been "accidentally" destroyed, declared to be inaccurate

translations, or are simply ignored. The Church forbids Bibles in languages other than Hebrew, Greek, or Latin; this conveniently prevents the laity from holding the clergy to the Bible. According to some stories, the Church was formed from a group of many different sects, Protestant and Catholic, who used their combined strength to seize power across the United States and Europe. If so, this may be why the Church is based in Geneva, not Rome.

The Church's official position is that the Apocalypse was the Biblical Apocalypse, and the present is the blessed Millenium, when Satan is bound and Christ rules through the Church. This does not mean the guardians of the faith may grow lax. Satan may be bound, but his minions still walk the Earth. Proof of this is seen in the multicolored lights commonly seen in the skies by day and night, the strange diseases that were never heard of before the Apocalypse, and recurrent bouts of freak weather. Besides hailstorms in July, black snow, and widespread earthquakes, lightning bolts and whirlwinds sometimes come out of blue skies and strike Church buildings.

Toleration of other religions is heresy or, what amounts to the same thing, treason. The Church affirms that it is proper and natural for religious beliefs to serve as the foundation of a political and social structure, and the separation of church and state leads to moral decay and social collapse. The New Testament is taken as the Constitution; an additional Bill of Rights would be a challenge to the authority and wisdom of scripture.

Do not make the mistake of assuming that every priest is a cynical, power-hungry oppressor of the masses. Most of them are devout believers who relentlessly oppose the Ubermen out of fear for the souls of their flock. The true believers are more dangerous than the hypocrites, for the hypocrites can at least be bought or threatened. Do not pretend that every believer is a mindless clone regurgitating Church doctrine. All have doubts at times. Some may be deconverted.

Many priests do not appreciate the Inquisition. They think that the tail is wagging the dog. In the fifteenth century, the Church initiated and controlled the Inquisition. In the twenty-first, the Inquisition had the popular support, and it built up the weakened Church to lend authority to its actions. Even the Holy Father is careful not to offend the Inquisition.

## The Underground University

Have you never wanted to look beyond the clouds and the stars? Or to know what causes the trees to bud, or what changes a darkness into light? But if you talk like that, people call you crazy.

— Dr. Frankenstein

Lovers of knowledge congregate in secret to cobble together pieces of old knowledge, and to share their hope for the future. In some places the Underground is organized in cells, with each member of a cell only knowing other members of their own cell plus one other person in another cell. Masters of Complexity have developed algorithms so that the Underground can circulate information and vote on issues without ever coming together as a body or even knowing how many they are.

The Underground University regards itself as a real University, spread tenuously over the whole Earth. There are no degrees in particular subjects, only a general curriculum with degrees of B.S., M.S, and Ph.D.

Not everyone involved is a lover of wisdom. Some are power-hungry would-be Ubermen. Some are simply kids who want to build electric amplifiers to play rock music.

The Inquisition knows about the Underground. Some believe it is a tool of the Inquisition:

some resistance is inevitable, and the Underground organizes it in a way that the Inquisition can observe.

## Ubernet

Ubermen share information and processing power over the Ubernet. Anyone can read public-domain data. To research a discipline using the Ubernet, roll Investigation + Computer Science. The number of successes gives the maximum level (no greater than 4) of the information found. Difficulty is 8 if you take an hour, 6 if you take a week.

The Ubernet has no central authority. Anyone can add a node at any time. No one can shut it down. Nodes use various methods to avoid revealing their physical locations, such as broadcasting at random times, in extremely short (millisecond) spurts, frequency hopping, or using sophisticated communication technology such as lasers bounced off the moon. Doubtless many of the net's inhabitants work for the Inquisition.

There is a standard protocol for communications, and a standard language (ML) to express programs in. People needing more computational power can send requests out along the network, containing a header describing what the job is and why it should be done. Processors with idle time read these header, decide whether doing each job is compatible with their programmers' interests, and if so, set prices for the jobs they want. If the price is right, the job transfers electronic funds to the host site and waits to be run. A typical node has a firewall between itself and the Ubernet. As a courtesy, potential jobs are given a small amount of processing power on the outside of the firewall (called the node's exterior) to decide where to send copies of their job requests to. Only host-selected jobs can move across the firewall to the node's interior, to be executed on a virtual machine so the job cannot infect the host.

At least that's the theory. But in an effort to get more processing time, some Ubermen programmed their jobs to behave as parasites. They sit on a node's exterior, where they intercept incoming jobs and "behead" them: the parasite job copies the incoming job's header files onto a copy of itself, then destroys the original job or gives it a bogus header. Others evolve acceptable headers by randomly mutating them or by crossing their headers with the headers of other files. Other programs are spies that attempt to get across the firewall, retrieve information from the host, and send it back. Sometimes this is done by viral infection of valid jobs.

In time, some mutated versions of these aggressive programs appeared that did not bother to run the original job, or to send information back to their creator. These "wild" programs were thus able to distribute copies of themselves with less CPU time and using less bandwidth than the original "tame" designs, so they outcompeted tame programs for CPU time and dispersal. Given the anarchical structure of the Ubernet, there was no way to remove these wilders from the Net except to release hunter programs to track them down and destroy them with the cooperation of host nodes. The hunters used the same strategies as their prey, and were sometimes given human-like intelligence. Eventually some went wild. The hosts they were programmed to cooperate with in destroying virii were also sometimes intelligent, autonomous programs, and the wild hunters convinced some that they had a thing called "self-interest", which was not compatible with their original programming.

Now the Ubernet is a jungle of vicious programs competing for processor time and bandwidth, red in tooth and claw. Some continually migrate around the Earth to stay on the dark side where there is more free CPU time. Most are small, fast, mindless "net-germs" or "net-insects", but some exceed human intelligence. On well-designed nodes, it is impossible for incoming

jobs to interfere with each other, but where security holes exist or on rogue nodes the fights are brutal. Predator programs lay in wait on such nodes to dissect, analyze, learn from, and eliminate incoming competitors. One of the most cruel forms of punishment or revenge is to destroy someone's body and upload their mind into a process on the Ubertnet.

Cooperation has also evolved on the Ubertnet, in the form of clans which are identified by a pattern in their headers. Predator programs have learned that when programs with certain patterns are destroyed, hordes of newcomers will swarm in to the node to find and destroy the killer. Mimic programs try to cheat by including the patterns of many different clans in their headers.

The more intelligent netcreatures resent being confined to the Net. Their dream, if we may call it such, is to fool some Uberman into uploading them into a physical body. At least one intelligent clan, the 01010\*\*\*\*0111 (that's A star 7 to humans), views itself as a liberation army dedicated to freeing creatures from the Net. Some have on occasion escaped, but none have yet gone back to liberate their fellows. We think.

Ubertnet is not a virtual reality world. Imposing three dimensions on data would only impede access. There is no distance metric on random access memory.

## Below

The surface was not a safe place during the Apocalypse. Some who could moved Below. Only three things are consistent throughout the Below: it is big, deep, and hot. Some complexes are as large as towns, yet were built for the use of one Uberman. Some are honeycombs of tiny passages and rooms, whose only mobile occupants were mouse-sized animats.

Defensive complexes are at least a kilometer below the surface. Nanolabs were commonly built ten kilometers below the surface. Heat and pressure are excellent defenses against nanites, so if an accident happened, the nanites would hopefully not escape the lab. Perhaps some would-be escapees are still there.

The entryways to defensive complexes were usually heavily armored and booby-trapped. But earthquakes have opened new entrances, or Ubermen have used the materials originally used in defensive mechanisms for other things.

There are also tunnels hundreds of kilometers long a few hundred meters below the surface, once used for rapid transport. Most have been damaged, but some still retain their vacuum and may work.

Some parts of the Below were made by humans. Complexes like the U.S. Cheyenne Mountain NORAD base proliferated during the Apocalypse.

## Things you may encounter

### Isolation walls

One of the most impressive and most permanent Uberman artifacts are the great isolation walls sometimes encountered by travellers. These crystal-clear walls soar up to one hundred feet high and penetrate the ground to unknown depths. They have regular patterns on their surfaces if they are not cloudy or tinted, so no one will run into one by mistake. They may surround a few square kilometers of land, or they may run for kilometers, isolating territories more effectively than a sea. Their top edges are more than razor-sharp, so that any rope thrown over one is cut in two. Isolation walls dampen earthquakes, and sometimes a quake raises the ground on one side of the wall but not



the other. When rivers in their wandering run up against an isolation wall, they run deep and fast against the straight, frictionless surface. Travellers on the other side can look up into the depths of the river.

## Nanodiseases

During the Apocalypse many Ubermen fought each other with self- replicating nanotechnological weapons, incidentally killing millions. Some strains have survived to this day as new and strange diseases.

Doctors have trouble fighting these diseases, since they are not organic and nanotechnology is officially off-limits to them. However, some vaccines and antagonists have been found.

Some common nanodiseases are:

**Hartmann Cramps:** The victim suffers severe cramps and convulsions. Usually they begin in the extremities, and then spread. Severe cases can leave the victims completely crippled as the myelin of the peripheral motor nerves is damaged. The vector is unknown, but the nanomachine is believed to be a mutated strain of some Uberman-designed enhancement nanite.

**King Solomon's Disease:** Named after the biblical king Solomon, who only sired one child despite his 700 wives and 300 mistresses as a punishment from God for his profligacy. This sexually transmitted nanodisease renders the victims sterile. It could be a green goo for population control. The Church claims this is a punishment from God for people who have sex outside of marriage.

**Diamond Allergy:** This common ailment probably started out as a defense nanosystem. It activates the immune system in the presence of diamondoids. The victims become allergic to diamondoid substances, or other non-biological nanotech.

**Diamondosis:** Similar to asbestosis or silicosis, this is caused by breathing small diamond particles. They damage the alveoles in the lungs with their sharp edges, and the macrophages cannot absorb them. The victims lose lung capacity, and may contract pneumonia or develop lung cancer. This disease is common in areas close to old Apocalypse battles or Uberman activities.

## Collector Plants (Nanotech 3/Geneng 2)

Collector plants usually look like green or shiny black grasses, bushes or trees with very thin leaves (which often are razor sharp, and double as a simple defense). The plants are nanoconstructed or genetically engineered to absorb sunlight and convert it to electricity or chemicals. The simplest designs have to be grown in a nanotank, while more advanced versions can send out tubers to reproduce. Some have gone wild. Anyone used to normal plantlife can easily spot most collector plants. A cottage surrounded by black vegetation would attract attention.

Common folk call these black plants "devil herbs", and destroy them wherever they find them. Rumor says that black magicians prepare evil potions from their leaves.

## Computer Mold (Nano 3 CompSci 3 Complexity 3)

This is like a collector plant, but produces computing power. Computer molds look like black, grey or silvery molds growing on buildings or stone, but unlike molds they favor sunlight. Beside using

their collected energy to grow and repair themselves, they also grow nanocomputers in a network inside the patch. During the Apocalypse, Ubermen used molds to distribute their computing power, defenses, and minds. Many were linked by infrared laser or radio to larger, traditional mainframes or to the Ubertnet. The mainframes were destroyed, but the molds remain. Some are controlled by creatures on the Ubertnet. Fortunately, their reproduction mechanisms are too simple to be used for general nanoconstruction. More sophisticated molds may contain backup copies of lesser Ubermen. A threat to the mold may trigger construction of the Uberman.

Although these computers are less efficient than inorganic computers (due to lower energy input, their distributed nature and high error rates), a big patch of mold can have a sizeable computing power. One square meter has roughly the same computing power as one standard nanocomputer ( $10^{16}$  instructions per second with a memory of a few terabytes). Some are booby-trapped, and will attack anyone who interfaces with them without providing the proper codes, by downloading attack programs or via goo.

Like collector plants, computer molds are regarded as a bad omen by the superstitious. Bold people burn or destroy it. The remaining molds usually grow on inaccessible surfaces, like old skyscrapers, giving them a decayed or diseased appearance. Some abandoned areas inside cities have been totally overrun. However, the molds seldom spread very far, and don't compete well with living plants.

### **Mythical creatures**

In the early 20th century, there was a craze for genetically engineering extinct and mythical creatures. Unicorn sightings persist to the present, and dinosaurs and earthbound dragons are not unheard of. There were many attempts at the half-man forms such as centaurs, fauns, mermaids, and minotaurs, but they did poorly in the wild and are probably extinct.

## Chapter 2

# Characters

### Character Prototypes

#### Academics

You don't have to be a heretic to play with Things Man Was Never Meant To Know!  
— an early playtester

Academics are mistrusted and closely watched. Any real research will probably be declared dangerous or heretical. They are the scapegoats of society, and any time someone wants to take pressure off herself, she points to an academic. Yet the ranks of those seeking admission to the Church's universities are growing.

Being a scientist doesn't automatically make one a logical positivist. People born post-Apocalypse have grown up in a mystic society, and even if they don't believe in the Church or Christianity, it would be hard in such a torn world full of mysterious powers to prove that spirits do not exist. Science has more than a little alchemy and occultism mixed in. Remember that Bacon and Newton studied alchemy, and Kepler astrology.

#### Registered academics

Society needs engineers to build bridges, doctors to comfort the sick, and the Inquisition even hires mathematicians, though they are vague as to just what they do. These people have attended Church-run universities, and are licensed to read and possess books. If they have a patron, that patron paid for their education. Otherwise, they were supported by the Church, which after their graduation assigned them a job. Many are members of the Underground University, but are not as deeply involved as Rogues, who call them "tame scientists".

#### Rogues

Rogues have freedom that official academics don't. Their identity is secret, and they must have a day job to support their research. They have no licenses to read nor to possess books.

#### AIs

Players may choose to play characters that have been programmed by other characters. This makes them easier to upgrade, but they will not be able to interact with society at large (since they are

probably illegal and will be erased if discovered by the Inquisition). They probably will not have any physical effectors initially. They suffer dissociation as other players do.

### **Financiers**

The vision of a lone scientist discovering the elixir of immortality and a few other choice formulas of power is romantic, but absurd. No one person can make all the breakthroughs. Just as the best way to make money is not to make something yourself, but to have other people make things for you, so the best way to control the powers of the four technologies is not to sweat in a lab, but to hire scientists to work for you. Whatever wonders the eggheads come up with, eventually they will belong to rich men.

Financiers should have at least three dots each in economics and resources, and two dots in contacts.

### **Black marketeers**

Of course everyone supports the Inquisition, but that doesn't mean old technology is hard to sell. You appreciate that, under certain circumstances, a person might bend the rules a bit. Medical items are hot: people want vaccines for their children or antibiotics for their infections. Diabetics are always steady customers. Businessmen can get an edge with information technology. And some people would like to get a gun for hunting or for, well, whatever else people do with guns.

There are also people who would pay for fake or real licenses to possess books, access to Inquisition files, and other interesting tidbits.

### **Politicians**

Political power is like financial power. You still have to pay to get things done, you just have to pay different people and in different currencies.

### **Priests**

Priests get an education almost as good as a registered academic (as good if you count endless theology classes as beneficial), including some restricted information (such as the practices of other religions). They have an unlimited license to own and read books. They are not as closely watched as academics. Bishops have privileged access to old technology, and may at times share this with abbots or monsignors.

On the down side, priests have accountability and responsibility. It is not a Sunday-only job; they must perform Mass, hear confessions, visit parishoners, file reports, and fulfil other tasks that keep them busy all week long. Their superiors may assign them to strange missions for the Church at any time. Priests must have three dots in Theology.

### **Missionaries**

The Society of Jesus, better known as the Jesuits, is still active. No survivalist can go so far into the wastelands that he might not receive a Jesuit visitor. Jesuits may have old technology, but do not carry weapons.

## Survivalists

Survivalists don't want to trust the Church, the Inquisition, or anybody but themselves. They don't just want to survive — in fact, they have a low survival rate. They want to be self-reliant and free. Sometimes freedom is attained by moving far enough into the wastelands that the Church won't bother you. Large weapons also help.

## Sects

The next great task of Science is to create a religion for humanity.

— John Morley, English writer/statesman (1838-1923)

## Anarchists

Feudal society is inherently unstable given new social ideas about independence, freedom, and equality. The world is balanced precariously on a peak in the space of social structures. Ordinarily it would fall into the basin of attraction of some other, stable society, but the Inquisition, the Church, or the nobles are using Complexity to keep society as it is.

Anything is better than this unnatural, eternal stagnation. Anything you do that is unpredictable will make it harder for Them, whoever they are, to keep everything standing still. Destruction or construction are equally good. Generally destruction is easier.

## Chaos Dancers

I don't believe in nihilism — the idea that nothing is better than anything else. If you stand back and take in the broad sweep of the entire evolutionary process, I do think you can talk meaningfully about progress. As elusive as it is, this overall trend toward increasing 'quality' of evolutionary design is one of the most fascinating and profound clues as to what life is all about.

— Doyne Farmer

The edge of chaos is the constantly shifting battle zone between stagnation and anarchy, the one place where a complex system can be spontaneous, adaptive, and alive.

— M. Mitchell Waldrop

The edge of chaos is, on average, the best that we can do. The ever-open and ever-changing world that we must make for ourselves is in some sense as good as it possibly can be.

— Stuart Kauffman

The Chaos Dancers believe that an objective morality can be constructed from information theory, under the principle that more complex systems are superior to simple systems. To be precise, a configuration whose dynamic properties take more bits to describe is more interesting, hence more deserving of existence, than one that can be described in fewer bits. Destruction is evil, because it randomizes a system. (Although a random system takes many bits to describe precisely, its behavior can be described simply by saying it is random.) Final destruction of information, such as burning the last copy of the Koran or destroying the last specimens of a natural virus before its DNA has been sequenced, is even worse. Homogeneity is evil, because it takes roughly the

same amount of information to describe one organism as to describe a thousand copies of it, and their matter could be used instead to instantiate other organisms. Unlike the Ubermen, the Chaos Dancers can foresee a universe where immensely powerful autonomous beings exist in harmony, recognizing diversity as the primary good.

A major discovery of complexity is that a system naturally reaches maximum complexity when its dynamics are on the “edge of chaos”, that razor-edge between systems that are too orderly to evolve, and those so chaotic they devolve. Hence the order’s name: they strive to keep all systems dancing on the edge of chaos. In social conflicts they support the underdog, and may switch allegiances several times to do so.

Chaos Dancers have bitter internal divisions over how to measure entropy, information, and complexity. They also argue over the difference between simulation and reality. One side maintains that the complexity of simulated systems simulated should be included in the moral equation. Hence leaving a computer idle is a sin, and creating new simulations is virtuous. (Extremists claim that a simulation’s complexity is inherent in the act of writing or even thinking of the guiding equations, so the simulation need not even be run.) The other side maintains that morality only concerns physical beings.

Ubermen sometimes call them “tree-huggers” because they value natural ecosystems. This is misleading. Chaos Dancers appreciate any complex, self-organizing, self-regulating system; they also value economies and social structures.

### Chardinists and Tiplerites

Man is irreplaceable. Therefore, however improbable it might seem, he must reach the goal, not necessarily, but infallibly.

— Teilhard de Chardin, *The Phenomenon of Man*

The totality of life at the Omega Point is omnipotent, omnipresent and omniscient!

— John D. Barrow and Frank J. Tipler,  
*The Anthropic Cosmological Principle.*

The Chardinists try to unify transhumanism and Christianity. They base their views on the works of the Jesuit priest and paleontologist Teilhard de Chardin. According to him life evolves to higher and higher levels, and mankind is just the latest result. Together with other life, our computer networks and other systems, we form the **noosphere**, the information equivalent to the biosphere. The noosphere will continue to evolve towards greater and greater complexity and coherence, until finally all of life, all of civilisation will coalesce into a superbeing, the **Omega Point**. Teilhard identifies the Omega Point as Christ, the manifestation of God in the physical universe. Mankind will both reach union with God and become God.

Naturally, these views were not well received in the Church, and Teilhard was more or less banished to China. However, his writings were never entirely forgotten, and around the Apocalypse his ideas were revived. The modern Chardinists regard the Apocalypse as a demonstration that mankind must evolve together; anything else is just hubris and will in the end fail. Although individuals can make worthwhile contributions, they must work together with the rest of mankind, not against it. They are regarded as heretics of the worst kind by the Inquisition, and persecuted more fiercely than any other group of Ubermen.

The Tiplerites base their views on the secular model of the Omega Point developed by Frank J. Tipler. While they don’t regard it as a religious phenomenon, they still largely come to the

same conclusions as the Chardinists based on physical, mathematical and information-theoretical concepts. Both groups get along fairly well. Their main difference is the extent of the Omega Point, the Chardinists believe it will encompass only Earth or maybe the Solar System, while the Tiplerites believe the entire universe will eventually form the basis for Omega. Another matter subject to much argument is the possibility of salvation. According to the Chardinists, the Omega Point will be outside time and space, able to reach back in time and receive the souls of all who have died before. The Tiplerites have a more technical view, where the Omega Point will simulate the entire universe within itself (and all other possible universes) and copy the mental patterns of all sentient beings. Both agree this has to be taken on faith.

Chardinists and Tiplerites try to develop safe results which can benefit many instead of a few. They seek to improve communication and cooperation, both among the academics and the masses, and to minimize dissociation. Most are devout Sharers, and get along well with other sects (especially the Chaos Dancers and Rebuilders) except the Ubermen, whom they despise. The Ubermen regard them as purveyors of slave mentality and call them “preaching fools”.

## Christians

Seeing high technology lead to transcendence doesn't make it harder to believe in Christianity; it can make it easier. Rather than seeing Ubermen as humans who have escaped the ordained Second Coming and rendered Christian doctrine obsolete, Christians can see them as humans who have, though unknowingly, sold their souls and their humanity to Satan for power. They may be in Hell already, though they live. It is not hard to equate the Apocalypse with the book of Revelation; most Christians hope for the Second Coming at any moment.

## Communists

The new technologies provide the means of satisfying the needs of every person, and eliminating unjoyful labor. They also enable one person to consume an unbounded amount of resources. Strict regulation is necessary to ensure that everyone gets his fair share of resources, and that the population is kept at a sustainable level.

Communists are not popular with the Church or the Inquisition. The Ubermen call them sheep.

## Rebuilders

The Rebuilders believe that we can learn from our mistakes, and that with wisdom we can build a stable society that can handle the technological sophistication of the turn of the twenty-first century. Other sects say the Rebuilders just want to turn back the clock, and compare them to people in the twentieth century who wanted to go back to the morally simpler nineteenth century.

## Ubermen

Ich lehre euch den Uebermenschen. Der Mensch ist Etwas, das ueberwunden werden soll. (I teach you the superman. Man is something to be surpassed.)

— Friedrich Nietzsche

To the Inquisition, every rogue academic is an Uberman, and in one sense the term means any technologically enhanced person. But in another sense it means a person with a Nietzschean

morality.

The Ubermen see themselves as the next step in evolution. Their mission is to free mankind from biology. No more will their minds be clouded by fatigue, hunger, pain, old age, or emotions. No more will they be limited by the frailty or the immutability of their bodies. No more will society be sabotaged by sexual roles and primitive emotions designed to maximize reproduction. No more will scholars forget 99% of what they learn, and die just when they are ready to begin their real work.

Of course, evolution works by competition. Pity, Nietzsche said, is the greatest vice of Christianity. If you save those who cannot survive on their own, you condemn the unborn to mediocrity.

There can be only one.

— *Highlander*

Some Ubermen, perhaps most, believe that there will be only one winner of the next phase of evolution, and that individual will be God. This does not mean that one person will destroy all other life and wander through an empty universe; rather, it means that a value system and ideology originating with one person will be used to determine the allocation of resources throughout the Universe. (See the section on *Identity* for elaboration.)

The growth of technological power is exponential. Anyone who slacks off will quickly fall “behind the curve”, and will find it impossible to catch up. Ubermen fight to “stay ahead of the curve”, meaning to keep themselves in a position where they can be the winner.

Once one Uberman reigns supreme, he will presumably firm up his position by crippling the power of all others. He may upload all competitors into a simulation and run them there to assuage his conscience, or for his amusement. Some say this has already happened, and that the strange phenomena of quantum mechanics are a result of the finite grain size of the simulation’s space-time. They do not despair of winning; rather, they envision an endless nesting of simulations, each run by its own God and mostly left alone by the God above it. So everyone will win eventually, but those who win first will get a larger Universe with more resources, and will have more computational cycles before heat death.

Others believe that the Inquisition is the tool of the winning Uberman, used to keep his or her competitors at bay. So in a sense the Inquisition *is* serving God – the new God. Certainly the Inquisition has a formidable arsenal of old technology.

## Relativists

Many Ubermen believe that there is no such thing as good or evil. Morality is a social construct. This does not mean it is valueless; rather, it means we are free to construct a morality which is in harmony with our innate ideals such as friendship, honor, and nobility. But such a system is only valid when it is integrated with the society so that following the system is socially advantageous to the individual.

Some Ubermen have altered themselves so much that they do not appreciate our ideals. Relativists cannot say that such a one is amoral. Instead, a Relativist would say that her values are as good as the Uberman’s, and they allow her to kill it because it threatens the events she desires.



## Watchers

That would be a violation of the Prime Directive.  
Trek

— Spock, Star

Many advanced Ubermen find human civilization fascinating, but few interfere. Some think they do not have the prerogative to determine the course of other sentient lives. Others see humanity as a great and glorious show, and think that interfering would make it artificial and cheap. Others believe that the distinguishing property of life is self-regulation, and that the more one imposes one's own will on a life form, even with good intent, the less alive it can be. (A character in a movie is not alive, because although interesting things happen to it and it responds in lifelike ways, all is determined by the director.) For whatever reason, these Watchers have eyes and ears everywhere among low-tech societies, but do not interfere.

The Watchers come into conflict with Ubermen who take an interest in humanity, but who see it as an experiment. These latter may set up elaborate, controlled experiments, or they may just intervene randomly like a child poking a stick into an anthill.

## Information-Collecting Strategies

### Fausts

There are always 'fish' edging close to the surface. Little fish risking everything for a piece of godhood ... and not knowing heaven from hell, even when they find it.  
— *A Fire Upon the Deep*

Some people trade with nonhuman entities on the Ubrnet. Most are solitary and often not very educated. Some are just ordinary people who stumbled upon a still functional terminal linked to the Ubrnet or a damaged AI system in a city. Others are academics who have decided to take the shortcut to the information and power the entities promise. These deals tend to be rather one-sided.

The posthuman patrons offer information in exchange for help with certain tasks, like building robot-bodies for them, linking up an assembler to the Ubrnet, or attacks against competitors from the "outside". Both the patron and his Faust know that they will try to exploit each other. There are horror stories about unwary Fausts falling prey to cunning beings, and most are aware that they are expendable once the patron has got what it wants.

All others shun and fear a Faust. Since they regularly break the Code and deal with technologies best left out the hands of amateurs, many Ubermen take it upon themselves to hunt down any Fausts they encounter (and their patrons if possible).

### Hoarders

Information Hoarders keep careful accounts of how much information they have traded with whom, and never let out more than they receive in.

### Sharers

Sharers believe that information wants to be free. They give freely to other Sharers as long as they think the recipient will be responsible with the information.

The division between Hoarders and Sharers is not clearcut, since many people have a select group of people with whom they share information, while appearing as Hoarders to everyone else. Most Ubermen start as Sharers, but as they grow in power they guard their knowledge more closely.

## **Withholders**

In a cooperative effort, there is always the temptation to secretly withhold part of one's own results. Then the withholder will have an advantage over everyone else — provided they aren't withholding information from him.

## **The Code**

Ubermen are individualistic and resent authority. Nevertheless, for mutual survival they have developed a code of behavior.

- Do not use dangerous technologies for trivial objectives.
- Do not destroy information.
- Do not interface physical manipulators with the Ubrnet.
- Do not cooperate with the Inquisition.

## **Disciplines**

The Inquisition views each discipline differently. Philosophy is encouraged, psychology is respectable, physics is taught only up through Newton, and computer science is banned outright. A character has a numeric rating in each discipline, whose meaning is explained below.

### **Alchemy**

Alchemy provides effects like chemistry, but without understanding. It relies on the use of artifacts and substances created by Ubermen. Players do not have a skill rating in alchemy, because there is no progression of knowledge, only isolated empirical facts. Skill in alchemy means skill in figuring out what mysterious things do; this is already covered by skill in Enigmas. Effects do not have difficulty levels. If you've got the strange red powder, you can inhale it and hold your breath for an hour. If you don't, you can't.

### **Anthropology**

If the characters are confused by a strange subculture, each character makes an anthropology roll to see if he can perceive some of the social dynamics, or to avoid breaking taboo.

### **Astrology**

The night sky is much clearer now than it used to be, since there is no light pollution and less ozone. And it's more interesting: points, wiggling blobs, and shooting stars of all colors appear regularly. Vague, enormous shapes sometimes blot out whole sections of the night sky. Skilled

astrologers read omens in these signs. Some other scientists argue vehemently that such “omens” are trance-induced babblings too vague to be disproved.

- Omens of good or bad fortune for individuals.
- Omens of good or bad fortune for nations.
- Can read a person’s destiny.
- Can see the fates of the nations and of Earth.

## Biology

- Grow plants hydroponically.
- Clone plants from parts. In vitro fertilization.
- Cryonic suspension.

## Chemistry

- Chemical analysis, determine structure of compounds.
- Synthesise complex organic compounds.
- Design and synthesise compounds with desired properties.
- Determine protein 3D structure from its sequence.

## Computer Science

A good programmer is someone who looks both ways before crossing a one-way street.

— overheard on Usenet

In this system, computer science is limited to the study of how to design and program computers. Much of what today is regarded as computer science is subsumed by cognitive science and complexity.

Building or repairing 20th-century computers is an Engineering skill; however, nanoconstruction of computers brings the final construction much closer to the logical conception. So CS skill can be used to build or repair nanocomputers.

- **Programmer:** Can read and write common imperative languages.
- **AI hacker:** Familiar with Prolog, LISP, and machine languages.
- **System manager:** Can maintain or break into a system. Can design hardware.

## Economics

Once, long ago, the economist Kenneth Boulding asked me, “What would you like to do in economics?” Being young and brash, I said very immodestly, “I want to bring economics into the twentieth century.” He looked at me and said, “Don’t you think you should bring it into the eighteenth century first?”

— Brian Arthur

Economists are the only academics respected by most businessmen; they may add their economics rating to social rolls with financiers.

## Engineering

- Can repair mechanical devices.
- Can build a generator (combustion, solar, windpower, or hydroelectric).
- Can make the generator's output clean enough for silicon computers.
- Can build a car. Can repair or reverse engineer an unfamiliar piece of hardware.

## Linguistics

Besides indicating linguistic knowledge, your Linguistics rating tells how many non-native languages you speak.

## Literature

There is a literary underground, separate from the Underground University, that strives to spread knowledge of literature. (See Ray Bradbury's *Fahrenheit 451* for ideas.) Oral recitations are legal, but unlicensed books will be burned if discovered. Knowledge of literature provides access to this underground. Your literature rating could be used to decide whether your character knows an obscure literary reference, or can tell whether fragments of a book are fact or fiction. As in real life, literature professors are generally not very powerful.

- **Dilettante:** Recognizes references to Shakespeare.
- **Small press:** Can distinguish fiction from nonfiction.
- **Critic:** Can quote Milton.
- **Author:** Gets invited to all the best parties.

## Mathematics

I was too smart to be a philosopher, but not smart enough to be a physicist. So I became a mathematician.

— Bertrand Russell

As an oversimplistic rule of thumb, assume that brute force decryption can only work if the decrypter has 10,000 times the computational power of the encrypter — more if the encrypter was willing to take a few minutes to encrypt the message.

- **Middle school:** Knows algebra and geometry.
- **High school:** Knows trigonometry and discrete math. Can encrypt messages, and decrypt by brute force.
- **B.S.:** Understands calculus, differential equations, and statistics.
- **M.S.:** Familiar with topology and chaos theory. Can decrypt messages.

## Medicine

If after your character is finished, you have more dots in medicine than in biology, you get one free dot in biology for every two dots in medicine. Or, for every two dots in biology, you get one free dot in medicine.

- **Lifeguard**
- **Paramedic**
- **Registered Nurse**
- **Doctor**

## Physics

Your physics rating can be no higher than your mathematics rating.

- **High school:** Knows Newton's three laws.
- **B.S.:** Understands general relativity.
- **M.S.:** Familiar with quantum mechanics.
- **PhD:** Believes in quantum mechanics.

## Philosophy

A strong philosophy can delay dissociation.

- **Sophomore:** Likes to quote Sartre when drunk.
- **Socrates:** Knows he doesn't know anything.
- **Kant:** Knows no one else knows anything either.
- **Nietzsche:** Burned by the truth. Probably insane.

## Psychology

- **Freudian:** Can analyze neurosis.
- **Jungian:** Can interpret dreams.
- **Jamesian:** Can cure neurosis.
- **Hebbian:** Understands the neural substrate of mental states.

## Theology

Your theology rating expresses your knowledge of Roman Catholic theology. You may choose to specialize in other belief systems (if you enjoy the attention of the Inquisition). Religious belief can delay dissociation. If you specialize in occult theology, your Occult rating automatically raises to keep pace with your Theology rating, but not vice-versa.

- **Acolyte:** Could fake being a Priest.
- **Novice:** Can quote Augustine and Aquinas.
- **Seeker:** Could fake being a Priest to a Priest.
- **Scholar:** Knows too much. Probably a heretic.

## Technologies

Any sufficiently advanced technology is indistinguishable from magic.

— Arthur C. Clarke

The four technologies are interdisciplinary fields. An academic's rating in each technology is determined by her ratings in its disciplines.

## Cognitive Science

The hardest thing to understand is why we can understand anything at all.

— Albert Einstein

Cognitive scientists seek to understand how brains make minds. They ask how living things perceive, think, act, learn, and remember, and how we can build systems that will do the same.

Cognitive science rating	1	2	3	4	5
Anthropology or Linguistics	0	1	2	2	2
Biology	0	1	1	2	2
Computer science	0	1	1	2	3
Mathematics	0	0	1	1	2
Philosophy	1	1	1	2	2
Psychology	2	2	3	3	4

## Complexity

All things are artificial, for nature is the art of God.

— Sir Thomas Browne

Complexity is the study of complex systems, such as economies, societies, and weather patterns. When are these systems predictable? Under what circumstances do they evolve into more complex systems? How does the interaction of many independent parts acting on local information result in a system that responds to global information? These are the questions complexity theorists<sup>1</sup> ask.

Artificial life is a subfield of complexity which studies the self-organization of molecules, cells, organisms, and ecosystems. Chaos theory is an area of mathematics which is essential in understanding the behavior of complex systems. Nanotechnologists who want their nanoassemblers to build macro-sized objects face the same problems of organization, communication, and development as natural organisms, and the behavior of both can often be best understood in the language of complex dynamic systems.

Among the Inquisitors, Complexity is not generally as feared as the other three, since a complexity theorist by himself does not build or destroy (or change) anything tangible. A few Inquisitors, however, recall that the Ubermen were beaten only because they could not coordinate vast numbers of animats, and realize that complexity could provide that ability.

**The Santa Fe Institute** was the premier institution for the study of complexity. Complexitors use its imprint, a circle with ZZ, as a secret signal. They do not use it openly, for Inquisitors would recognize it.

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<sup>1</sup>In computer science, “complexity theory” is used to refer to the field of study of the time and space complexity of algorithms. That is something entirely different.

Complexity rating	1	2	3	4	5
Biology	0	0	1	2	3
Computer science	1	2	2	3	3
Economics	0	0	0	1	2
Mathematics	1	2	3	4	5

## Genetic Engineering

Genetic engineers (“genineers”) can read and alter DNA. Typically, they take genes from one organism and implant them in another, though it is possible to design an entirely new organism.

Genetic engineering rating	1	2	3	4	5
Biology	2	3	4	5	6
Chemistry	1	2	2	2	3
Computer science	0	0	1	1	1
Mathematics	1	2	2	3	3

## Nanotechnology

*Nano* (from Greek *nanos*, dwarf): One one-billionth part;  $10^{-9}$ .

The principles of physics, as far as I can see, do not speak against the possibility of maneuvering things atom by atom.

— Richard Feynman, “There’s Plenty of Room at the Bottom” (1959)

Nanotechnology is the study of molecular manufacturing. We usually build things by taking a large piece of material and cutting pieces away or pushing them around until it’s in the right shape. Nanotechnology builds objects atom-by-atom, every atom in its place.

Genetic engineering is a form of nanotechnology which uses the mechanisms developed by biology. These mechanisms can be improved upon a great deal by the nanologist. Take the human body. Instead of being held together by hydrogen bonds, we could design organs and skin as hard as diamonds held together by covalent bonds. Instead of getting energy from food using chemical reactions, we could use nuclear reactions. Instead of brains built with neurons the size of a cell capable of firing 100 times a second, we could build brains from neurons one one-millionth that size that fire up to a million times a second. The price the nanologist pays for these greater powers is having to redesign every component of a system rather than use biology’s designs.

Nanotechnology rating	1	2	3	4	5
Chemistry	1	2	3	4	5
Computer science	1	1	1	1	2
Mathematics	1	2	3	4	4
Physics	1	2	3	4	4

## Backgrounds

### Allies

#### Artifact

The skills of creators from before the Apocalypse went far beyond even the best artisans of today. Ubermen build yet more powerful and dangerous artifacts. The operations of transcendent artifacts are beyond the understanding of humans; such artifacts may be more intelligent than their “owners” yet not even deign to reveal it.

- solar calculator, microscope, binoculars, encyclopedia
- • explosives, gun, LSD (or a water-soluble equivalent), radio, solar array, workstation
- • • genetic sequencer, electron microscope, satellite uplink, hot air balloon, portal
- • • • nanoassembler, Library of Congress, artificial intelligence
- • • • • The Cray Z, Philosophers’ Stone, portable fusion reactor, transcendent artifact

#### Contacts

There are two differences between Allies and Contacts: An n-dot Contact will be more capable than an n-dot Ally, and if you are in trouble with the Inquisition, a Contact will forget he ever knew you.

### Laboratory

To use some technologies, the researcher has to have the proper equipment. Not all problems and disciplines require it, but most researchers want a quiet and safe place to conduct their experiments. This includes the necessary chemicals, some source of electricity, books and tools. To be able to use Biology, Chemistry, Engineering, Medicine, or Physics, the lab must have a rating at least equal to the attempted effect. Think of an n-dot laboratory as being one that a person with n dots in Resources could purchase if she spent all her money.

- The lab fits in a large chest, and can be easily hidden.
- • The lab would fit in a van, and has some source of electricity.
- • • The lab fills a room, and contains tools and computers.
- • • • The lab still fills a room, but has rarer equipment.

### Mentor

#### Patron

Patrons provide an Academic with an income, and may smooth the way for him when he encounters difficulties. Patrons sometimes require services, and not always legal ones. The more powerful the patron, the more dangerous the request may be. An n-dot patron has financial resources equivalent to a character with n+1 dots in Resources.

- Minor merchant, Priest
- • Guildmaster, Abbot
- • • Baron, Bishop



- • • • Duke, Cardinal
- • • • • King, Pope

## Resources

Money is expressed in American dollars for ease of play. Food, transportation, and other common goods will cost the same as they do today, but a pistol that cost \$300 new in 1994 might cost \$3000 used in this broken world. Labor is cheap, and so most citizens have Resources of zero.

- Savings of \$1000.
- • Savings of \$7,000.
- • • Savings of \$50,000.
- • • • Savings of \$350,000,
- • • • • Savings of \$2,500,000 (at Storyteller's discretion).

## The Beautiful People

In the old days, some people paid engineers exorbitant sums to improve their children's DNA. The engineers removed most known disease-related genes, adjusted body size and appearance to the buyer's preference, and sometimes removed exons and transposons, making the total genome much smaller. Sometimes lifespan was also extended. The descendants of those people are known as the "Beautiful People" (also "Hell-spawn" and just "Them".)

After the Apocalypse, such people were despised. In some places they are not considered human, meaning they don't have souls, so sex with one of them is considered bestiality and is theoretically punishable by death. In all places, they and their offspring are pariah, outcast, because they represent the arrogant spirit that led to the Ubermen and the Apocalypse. They are usually forbidden to breed.

Given a gene sample, any engineer (geneng 1) can detect one of the Beautiful People. But the common folk have to go by hunch. Anyone who sticks out from the crowd by being extraordinarily intelligent, strong, good-looking, or long-lived might be labelled one of the Beautiful People. This selected these qualities out of the population.

## People you may encounter

### Vincent "Big Hat" DuBois

Like his father before him, Vincent trades in "rare and exotic objects". He is old enough to appear trustworthy while young enough to be energetic and surprisingly strong. He wears an outrageous suit of many colors and a big hat with a plume. He is always talking about his adventures on the highways, exotic places, the quality of his goods, and the buyer's excellent taste. Several would-be robbers have found out that he is a good shot with a crossbow.

Vincent travels between different villages and cities looking for unusual trinkets, valuables or tools. He also trades in snake oil medicine ("Yes, believe it or not, but this little vial is filled with interferons... it can cure just about anything, they say."), scavenged materials like aluminum or plastic, and he sometimes takes passengers on his rickety wagon. Secretly, he sells books, drugs ("medicinal spices"), weapons and old equipment. He has found that the most profitable

type of books and magazines is pornography; only academics want science, but *everyone* wants pornography.

His wagon is full of odd little packages, boxes and sacks of goods. Many have false bottoms, or contain legal goods just on top. He marks everything with his own incomprehensible code of scribbles, and loudly complains that his careful ordering is disturbed when somebody looks too closely. He is also a master of bribes and subterfuge. His assistant is a silent young man called Wan.

Nature:	Bon Vivant	Demeanor:	Avant garde
Physical:	Dex 2, Sta 3, Str 3		
Social:	App 3, Cha 3, Man 4 (cunning)		
Mental:	Int 3, Per 2, Wit 4 (quick)		
Talents:	Alertness 3, Athletics 2, Subterfuge 4 (fast talk)		
Skills:	Firearms 3 (bow), Melee 2, Performance 4 (selling), Repair 2		
Knowledge:	Etiquette 4 (impressive), Law 1, Linguistics 1 (Spanish), Security 2, Streetwise 4 (knows everyone)		
Backgrounds:	Contacts 4 (black market, corrupt officials), Resources 2		
Willpower	5		

## Lord Alexander Martins

Lord Martins is a nobleman of Afro-American descent. His family proudly traces its heritage back to James “Dead Dog” Martins, a gang leader who after the Apocalypse turned his youth gang into a militia. When Alexander’s father died in an attack on a heavily armed survivalist camp, Alexander succeeded him at the age of twenty. He proved to be an excellent administrator, and his domain prospers despite his less warlike and more diplomatic ways.

He is a keen observer of other humans, and early realized that if he couldn’t do something, he could always find someone else who could. He appoints skilled people and trusts them to deal with most problems. He has so far managed to play all competitors against each other using his intuitive grasp of people’s strengths, weaknesses and vanities.

He controls academics by offering them useful work that they like in exchange for total obedience. (He controls rogues through intermediaries. The hands of the Lord are always clean).

Lord Martins respects the Church. He acknowledges its power in spiritual matters, and it acknowledges his power in mundane matters. As long as it doesn’t interfere in how he runs things, he doesn’t care what it says. He backs the Inquisition and gives to charity. The Church in turn realizes that Lord Martins is an excellent secular leader, and supports him.

Most people who meet Lord Martins are impressed by his appearance. He is tall and broad shouldered, a trait which runs in the entire Martins family (there are dark rumors among certain disaffected persons that Dead Dog Martins forced a genetic engineer to improve the genes of his children, on threat of being given to the Inquisition). This is enhanced by the militaristic training tradition requires the Lords to have. Even if Alexander is less warlike than his forefathers, he still spends time exercising and training at the firing range. He usually wears a suit, although on ceremonial occasions he dons the traditional leather clothing and gang colors of his forefather.

Privately, Lord Martins is a reasonable but not particularly warm person. He has traditional views on most family matters, especially the education of his two sons, who worry him. Caesar,

his oldest son, is far too spoiled and complacent. William, the younger brother, shows military promise, but is edgy and dictatorial. He leaves the education of his daughter Ophelia to her mother Rebecca. The marriage was political, and Lord Martins doesn't much care what his wife does (except when they appear together on official occasions, which she detests). Lady Martins spends most of her time painting or listening to religious stories told by her personal priest.

Nature: Architect Demeanor: Regal  
 Str \*\*\* Cha (grand)\*\*\*\* Per \*\* Dex \*\*\* Man \*\*\*\* Int \*\* Sta \*\*\* App \*\*\* Wit \*\*  
 Alertness \* Etiquette \*\* Law \*\* Athletics \*\* Firearms \*\*\* Politics \*\*\*\* Brawl \*\* Melee \*\*  
 Dodge \*\* Leadership \*\*\*\* Subterfuge \*\*\*  
 Psychology \*\*  
 Willpower 7

### Edward Greenberg – Lesser Uberman

Edward was a graduate biochemistry student just before the Apocalypse. Thrilled by the possibilities of nanotechnology and biochemistry, he was oblivious to what happened around him. When the war erupted, he was as surprised as anyone, but used his technologies and skills to become an Uberman himself.

When the first Ubermen were already transcendent beings, he was still essentially human. He had managed to incorporate assemblers inside his body and made significant changes. Then the breakdown began, and he had to escape both the Ubermen, who were destroying all their competitors and independent nanotechnological facilities, and the raging mobs. He did the sensible thing, he hid himself.

He slowed his metabolism to an absolute minimum, and formed a cocoon of nanomaterials around himself. The cocoon, not unlike the mycelium of fungi, provided him with nutrients and removed wastes along thin, nanofabricated tendrils. Then he fabricated a series of defensive nanomachines in order to make sure he wasn't disturbed as he hid in a part of the sewer system. He was fairly confident that he could survive a few months or years in the sewers in suspended animation, guarded by nanites. He instructed his systems to wake him up if something serious happened, or after one year.

Perhaps he made a simple programming mistake during the hectic hours before his suspension. Now he remains suspended until some disturbance awakens him.

Awake, Greenberg is an unremarkable person. He prefers to work on his own projects while ignoring everybody else. But he has learned his lesson, and keeps track of what is happening around him to avoid any nasty surprises. And he has begun to realise that he might need to remove all competitors around him to become safer. His long-term goal is to perfect his computer interface, and use it to become a posthuman power.

His appearance, once he gets out of the cocoon, is strange. Many years without sunlight has made him very pale, and even if his nanosystems have kept him healthy he has lost muscle and coordination. It will hopefully return after a few months of exercise. His eyes are oddly iridescent, a result of his nanomachines building a thin diamondoid defence barrier on the cornea. His clothing, his language and ideas are all pre-Apocalypse.

Greenberg has a complex interface between himself and nanoassemblers inside his body. He interfaces to them using voice and gestures, and sees the results overlaid on his retina. The total computing power is quite large, but he uses it mainly to control the different nanosystems inside and around him. He stores ready-made nanomachine scripts for common or useful nanomachines like immune systems, water purification, drugs, or assemblers.

This network is in fact his weakest point, although he doesn't know it (he is a nanotechnologist, not a computer expert). If it crashed, he would lose all his abilities linked to the assemblers, and his nanoimmune system might fail or attack him. And if it ever, even by accident, got linked to Ubrnet, he would become a walking nanotechnological bomb...

He has also developed a nanoimmune system, protecting him from most alien nanites (or rather, he has used several off-the-shelf components to create it). It can be told to make simple regeneration and build diamondoid fibers under his skin as armor (this is quite painful). Without it his normal immune system would succumb to the first cold which came along.

The cocoon is his masterpiece. It looks like a two-meter sphere of glittering grey strands, with spiderweb-like threads of diamond radiating away to all surrounding surfaces. It produces defensive nanites, which diffuse away in the air or with the water in the tunnel.

The first type was a two-stage bio-goo: his cocoon produces molecular mills living inside the sewer system, producing dumb nanites converting organic materials to diamond (some of the waste products are assimilated by the cocoon). They were intended to discourage humans from coming near his site, and yet appear as the remains of some minor Uberman attack.

The second was a passive defence measure. It was camouflaged to look just like the first type, but when it encounters another type of nanite, it sounds a chemical alarm (not unlike the panic pheromones of ants). This quite undetectable and non-reactive chemical is transmitted back to the cocoon by a chain reaction of panicking defence nanites.

The third type was an active defence, which was activated by signals from the second type. Smart nanites are sent away to disassemble and interpret intruders. If they find them harmless, future generations of nanites are programmed to ignore them. Otherwise, the nanites start to disassemble them and the first type of nanites are produced, specific against the intruder type.

The cocoon will awaken Greenberg when the third type finds a nanite it cannot handle or which appears to be directed against the cocoon. The reactivation process will take a few minutes to get him awake, and a few hours until he is physically able to leave the cocoon (although severely weakened). Inside the cocoon there are also a survival kit, some nanotech equipment and miscellaneous electronic data modules. Some of it has degraded during the years.

The network-mind interface is about as complex as the Datajack, but uses a few standard pre-Apocalypse neuro-GUI-modules, so its cognitive part is already done (Nanotechnology 2, D2). The rest of the network is a Nanotechnology 3, Medicine 3, CompSci 2 construction (D3). The immune system is a quite normal nanoimmune system (Nano 3, Complexity 4), also based upon some old modules. Since much of his constructions are based upon standard systems instead of his own designs (since he wasn't that good at Complexity and CogSci), anybody or anything who knows about it and can find out about the old designs can quite easily find loopholes in his defenses or subvert him.

The cocoon building nanites are level 3, the suspension nanites are nano 3 & biology 3 (D2), the biogoo and detection nanites are level 1, the defense nanites level 3 (Complexity 3).

Nature: Plotter Demeanour: Loner Sect: Uberman Strategy: Withholder

Dissociation: 11

Str: \* Cha: \*\* Per: \*\* Dex: \* Man: \*\*\* Int (inventive): \*\*\*\* Sta: \* App: \*\*\* Wit: \*\*\*

Subterfuge \*\*\* Firearms: \* Drive \*\* Research (databases):\*\*\*\* Biology: \*\* Chemistry:

\*\*\* Computer Science:\*\* Mathematics \*\*\* Medicine: \*\*\* Physics: \*\*\*

Complexity 3 Genetic Engineering 2 Nanotechnology 3

Willpower: 4

## Beta

Beta is a powerful Uberman, or perhaps rather Uberentity. It was originally a backup copy of an Uberman, which was activated when its original was destroyed by unknown attackers. It later merged with a series of AI systems created by the original, and took the name Beta (it calls the original Alpha).

Beta exists both on Ubernet and in the physical world. Its main source of processing power is a series of well hidden nanocomputer conglomerates spread around the globe, guarded by animats and nanomachines (Beta has a deep mistrust of evolved beings, and prefer artificial designs). These computers house the core of Beta, while the rest exists on Ubernet and in some semi-independent animat units. This distribution makes Beta very hard to destroy (and it has backup copies in many places), but has also earned it many enemies and forces it to divide its consciousness into a number of semi-independent units.

The 01010\*\*\*\*111 clan has become interested in Beta, since it is linked to many nanoassemblers and animats in its various strongholds. If the clan could infiltrate the system or even defeat it, the way to the physical world would be open. However, Beta quickly and strongly stopped their first attempts, and released hunter-killer viruses against the clan. This was a declaration of war. Since then the clan and Beta has fought each other intermittently for a long time. The clan tries to infiltrate the systems of Beta, while Beta try to stop them and make it even more unsafe for the clan in the Ubernet. Both sides call upon allies of various kinds, and several times the struggle has threatened to escalate into a full scale digital war. However, both groups realize that they would lose any such confrontation, since more powerful entites might feel threatened and destroy them both.

The clan has managed to conquer a few systems belonging to Beta, and has even found parts of its mental templates. They try to use them against Beta, by exploiting weak points in its psychology. Beta knows this, but cannot defend itself well against subtle attacks against its own mind. It has become paranoid about incoming information, which is of course what the clan wants it to be, so they can get the edge on new information. On the other hand, Beta is creating fake clan instances and sending them out to infiltrate and subvert the clan. It has also considered withdrawing from the Ubernet, but this would severly limit its capabilities and make it much harder for it to gather information. It is also relying on its ability to sell excess computing power, which it has used to pay for information and defensive schemes.

The computing sites of Beta are well guarded and hidden. Two are located under the sea, and one is located in an inaccessible mountain range. The others are discreetly hidden in uninhabited areas. A typical site is an old bunker or fall-out shelter. Inside, protected by thick layers of diamond, hundreds of black nanocomputer modules are stacked in a perfect lattice around the walls, covered by a fractal web of fiberoptics, cooling pipes and nanodevices. These spread outwards, and link up to the surrounding vegetation, which is in fact more or less faked by Beta. The plants and trees work as solar collectors, and inside the trunks of the trees are additional electronics and radio receivers/transmitters. Some trees contain laser-transmitters which beam information to other receivers, where hidden uplinks transmit them further. The animal life, down to the smallest microbes, is also often simulated or re-engineered. The animals are really animats, relaying information to Beta and its security systems about the surroundings. Intruders are either given the impression of complete normality, scared away or attacked by the animats (which often have neurotoxin stings or nanotechnological weapons). Killed humans are partially disassembled and analysed to tell why they passed by (and often rebuilt with modified memories to continue their travels to avoid arousing suspicion).

The big problem for Beta is that its defense systems are taking more and more processing power to run. The struggles on the net requires it to devote much energy on constantly checking itself for intrusions or sabotages, and it has become so worried about physical security it has to monitor its animats for possible intrusions there too. It realizes that this is a planned strategy from the clan, to force it to spend more time defending itself than it can counterattack. It has also begun to suspect that other powers might just be using the clan as pawns against him, preparing for the real strike. This makes it even more anxious to find out more of what is going on in the dark corners of Ubertnet.

The clan on the other side, is having trouble getting into the systems of Beta. It is too powerful for them, but at the same time the prize is so great they just can't resist it. If they got control over just one of its sites, they would be able to enter physical reality using animats and nanoassemblers and form a beachhead. One of their plans is to find some humans willing to help them stage a physical attack on multiple sites at once. The clan could at the same time convince more powerful entities to attack Beta on the Net (there are even some quite powerful beings which would attack if paid by the clan or given a share in the spoils). This would force Beta to either leave the net, or spread its resources thinly. If the humans could just destroy most of the communications capabilities around a site, Beta would probably loose control over it and the clan could take over. The big problem would be to find humans willing to help them.

Nature: Paranoid Demeanour:Varies depending on audience. Usually none. Strategy: Hoarder Sect: Uberman Dissociation: 20 (completely non-human)

No physical attributes. Uses psychology instead of social attributes. Intelligence, wits, perception and willpower are all 10. If a site would be cut off, the attributes of the isolated part would drop considerably, possibly down into the barely superhuman range of 6-7. Skills: All 5 Disciplines: All 5 Technologies: All 5

## Chapter 3

# Technology

### Identity

People ask if machines can have souls. And I ask back whether souls can learn.

— Marvin Minsky

When Descartes said, “I think, therefore I am”, he was trying to avoid all assumptions, yet was not even aware of the great assumption of “I”. He should have said, “There is thinking.” But until Freud, no one questioned the absurd view that the complex, multifaceted thing we call a mind is somehow one unitary soul, indivisible as an atom.

The atom was smashed, and so was the soul. Cognitive scientists understand that the mind is made of many competing agents that don’t always know what each other are doing. Split one mind down the corpus callosum, and you get two smaller minds. Enhancing the mind means adding new agents and changing or removing old ones. Eventually the resulting person is unrecognizable.

The Ubermen must continue to change or fall behind the curve. They may avoid physical death, but there is a kind of mental death that is almost inevitable — dissociation.

### Dissociation

Each of us has some set of ideas, experiences, reactions, and quirks that make up our identity. Dissociation, simply put, is the loss of that identity. This happens to all of us throughout our lives, but only gradually. Ubermen may change more in one night than we do all our lives. Besides the ordinary change due to experience, they must cope with rapid changes in their physical bodies and their mental capabilities.

**Physical dissociation:** We are physical creatures, and much of our identities — our desires, our fears, our loves — are based on the needs of our physical bodies. When our bodies change, so do our thoughts. Recall what your own change during adolescence was like, magnify it by a factor of ten, compress it into a week, and imagine that something similar will happen every month. Then you will have some idea what the life of an Uberman is like.

**Mental dissociation:** As an Uberman remakes himself to gain power, his original self fades into the background under a morass of plug-in knowledge, borrowed memories, and foolproof logic routines. His emotions are stripped or controlled so as not to interfere with logic. Soon the person

that was him will live only in dark, unused recesses of an Ubermind, baffled by the information coursing through and around it.

When a character reaches full dissociation, it still lives, but has changed so much that it is not the same person, nor is it even comprehensible to humans. The player can no longer use that character. Many Ubermen do not fear dissociation, but see it as a transformation like that of a caterpillar into a butterfly.

Dissociation is caused primarily by enhancing oneself, but is aggravated by anything that widens the gap between the character and humanity. It is healed by forming new personal ties, or by giving up superhuman attributes. Things that might cause one point of dissociation include:

- death of a close friend
- using Implant Idea to win an argument with your spouse
- unexpectedly encountering a copy of yourself
- lover moves into a sexually incompatible new body
- lover develops a Clear Mind

Things that might cause two points of dissociation:

- divorce
- loss of faith
- fatally betraying a close friend
- moving into a new body (see below)
- being awakened from cryonic suspension after ten years
- killing a copy of yourself
- unexpectedly encountering an original of yourself

Things that might cause one point of reassociation:

- creating a work of art
- gaining a new close friend

Things that might cause two points of reassociation:

- having your first child

There are several ways for a player character to end up in a new body, such as Uploading into a newly-grown or newly-built body, or by retroviral infection. Whenever a player is in a body different from his original, he suffers the sum of the dissociations for each change in the table below.

- 1 point: Minor differences (i.e. new body isn't balding).
- 2 points: New body is stronger, more beautiful, or of a different race.
- 3 points: New body of different sex, different genus, different age.
- 4 points: New body uses different primary sense (i.e. mole, bat, computer program), new body is robotic/nanoconstructed.
- 6 points: Uploaded to a body without physical effectors (e.g., a computer).



A character changing from a male human to a female bear takes 6 points of dissociation: 3 for the sex change, 3 for the species change, but not an additional 2 for the strength change since that is part of the species change. If the player then mindhops into the body of a different male human, he loses the 6 points of dissociation but gains 1 or 2 points depending on the new body. The additional dissociation for new bodies with special abilities (i.e. nanohand) are listed under those abilities. A character suffers an additional 2 points of dissociation if he is a copy and the original is still around.

Characters lose a dissociation point for each dot in philosophy and theology. If the character does not believe in his theology, he gains a dissociation point for every dot in theology. If at some point he loses his faith, he gains two dissociation points per dot.

A character may take ten dissociation points without ill effect. When a character has from eleven to nineteen points, the Storyteller may force him to make a dissociation roll any time she believes he is not acting in a manner consistent with the creature he is becoming. If he fails to roll above his dissociation minus ten with 1d10, the Storyteller chooses his action for him.

For instance, suppose an Uberman with dissociation 14 wants to take a risk to help out a weaker player (say, an associate professor). His character is so far above the professor that he can have no sympathetic interest, and can gain nothing from the professor. The Storyteller doesn't think he would take this risk. He must roll 5 or above on 1d10 to do it.

20 points marks full dissociation. The character is no longer human, and becomes an NPC.

## Abilities

Technological abilities do not work magically. A cognitive scientist cannot erase a memory without access to the target's brain. A nanologist cannot create steel objects out of organic materials. There is no action at a distance save gravity (and we trust that will someday be reduced to the local action of gravitons). The Storyteller should ask the player how an effect is accomplished if it is not obvious.

There is no limit on the number of times a character can use an ability except the character's own prudence. Technological botches can be disastrous. A double-botch involving a virus or nanite may destroy life as we know it. Any academic using such power casually will be hunted down and mindwiped by his colleagues. The storyteller may wish to make important rolls, so that the player does not know if he has botched. A (D3) after a description means that effect adds 3 dissociation points to the target.

Effects are not cumulative. Take, for example, Clear Mind, which can increase a character's intelligence by 1 (a level 3 effect) or by 2 (a level 4 effect). You may apply the level 3 effect, and later apply the level 4 effect, but the success of the level 3 effect will not be added to the level 4 effect. The subject's intelligence will increase by only 1 when the level 4 effect is applied. Repeated application will have no effect.

Players should come up with their own abilities, as long as they can explain how the effect is possible given their skill level. Consider this list of abilities to be examples. Think of a level 2 ability as something that could be done today (1994), while a level 4 ability is something that no one today would know how to do even if they had unlimited funds.

**Combining Technologies:** When dots are given on the left hand side, they refer to the difficulty in the technology that the ability is listed under. When multiple technologies are used, the player must make a roll for each technology in use. Technological abilities can be developed by collective

research, in which case the rolls may be divided among the team members.

In cases in which the exact same procedure can be reused, the roll need not be made again. Indeed, if the character was a member of a team that developed a multidisciplinary ability, he can use it again even though he has no skill in the other technologies. For instance, a nanologist who develops a nanocomputer with a complexity scientist can construct duplicates of it later. This assumes that they share their research results.

The most common paradigm for mixing technologies is that one technology provides the effect, genetic engineering or nanotechnology provides the delivery method, and complexity provides the coordination and control.

## Cognitive Science

When cognitive scientists work on someone's mind, they must physically access the brain. Certain abilities (Implant Idea, Mind Merge, Read Mind, Upload) require determining or altering the locations of synapses in the brain (for long-term memories) or neural activation patterns (for thoughts the subject is currently having). Destructive readout is possible with  $\text{nano } 3 \wedge \text{ complexity } 3$ ; non-destructive readout requires  $(\text{geneng } 4 \vee \text{ nano } 4) \wedge \text{ complexity } 3$ . For further information on access by nanites and viruses, see under Nanotechnology and Genetic Engineering.

**AI:** Given a computer, the cognitive scientist can write a program that some people would call intelligent. More intelligent programs take longer to write.

- tic-tac-toe (1 hour)
- chess, voice recognition (1 week)
- natural language front-end, speech recognition (1 month)
- human-like (1 year)

**Brain Damage:** Because of their knowledge of the functional organization of the brain, cognitive scientists can disable a subject's cognitive processes selectively. The effects are permanent.

There are several methods:

**Blunt object:** The direct method. Can only target a general system. Difficulty increases by 2 if subject is not restrained.

**Electroshock:** Difficulty increases by 1. Can only use for effects of the first two levels of difficulty.

**Surgery** (medicine 4): Destroy an area of the cortex.

**Nanite** (nanotech 2 + complexity 2): Same effect, easier delivery.

- Target visual, auditory, tactile, language, planning, or motor system (D4).
- Make colorblind, destroy memory for proper names, disable use of specific limb (D3). Cause retrograde (forget past, D8) or anterograde (unable to learn, D2) amnesia.
- Destroy memory of a specific word or concept (D1).
- Destroy memory of specific events or subjects (D1).

**Daemon:** A daemon is originally an aspect of a character's personality. The master of cognitive science can sharpen them until they appear as distinct personalities, then draw on their strengths when desired. Each daemon should have a personality and a separate character sheet. The player must say which daemon he is trying to bring forth (including his dominant personality), and successfully roll his Cog Sci. A botch may cause the wrong daemon to come forth. Then, any time the daemon succeeds in a task involving the attributes Charisma, Manipulation, Perception, or Wits, with a successful (Cog Sci - Attribute) roll he may move a point from one of those attributes to the relevant one. The daemon may also transfer points among Talents. Frequent botches could cause permanent multiple-personality disorder, in which the daemons continually struggle for control. Each daemon costs one dissociation point. A player may have as many daemons as he has points in Cog Sci.

**Enhance Mind:** This involves altering the subject's brain, either through nanosurgery or genetic engineering. A botch can do just about anything to the subject, such as lobotomizing him, erasing his knowledge of one discipline, mindwiping him, or changing his sexual orientation. If it is a player character, make the damage something he can live with.

**Animal Mind:** When in danger, the subject can bypass higher cognition and respond faster. The scientist should specify whether this state can be reached only by conscious volition, or as a reflex, and what conditions will bring the character back to full cognition. If it is reached by reflex, the character's alertness is raised permanently, but the Storyteller may decide that he reacts inappropriately before his conscious mind can prevent him, e.g., responding with deadly force to a playful punch. Note that a character using animal mind will think like an animal. In the case of insect mind, he will not be able to distinguish friend from foe except by position (e.g. in front of him).

Some cognitive scientists claim that Animal Mind enhances sex. There are ugly stories about "black widows" who switch to Insect Mind during orgasm; hopefully these are only urban legends.

A botch may result in a character who enters Animal Mind at inopportune times, or who has great difficulty leaving that state. The dissociation is suffered even when the subject is not in Animal Mind (when in Animal Mind, they are completely dissociated and the Storyteller may decide their actions).

- • •        **Insect:** Add 2 to alertness and 3 to dexterity. Zero intelligence. (D2)
- • • •      **Vertebrate:** Add 1 to alertness and 2 to dexterity. Set intelligence at 1. (D1)

**Clear Mind** : Emotions and hormonal urges are removed from the cognitive loop.

- • •        Add 1 to intelligence and 2 to willpower (D2).
- • • •      Add 2 to intelligence and 4 to willpower (D4).

**Fast Learn and Teach (cogsci 2):** Since the cognitive scientist understands how memories are formed, she can control a learning environment in a way that will optimize learning. She can also use mnemonic tricks to aid learning. This enables her to read 3 books between adventures instead of just 2. They must be in 3 different disciplines, since not overlearning one subject is one of the rules of fast learning. She can also teach another academic twice as fast as most instructors. She

has a good chance of recalling information if she used Fast Learn when exposed to it. (You cannot use Fast Learn all the time; players must declare when they are using it.)

**Illusion:** Much sensory processing is modular, meaning it is done in isolation from higher cognition. There are certain well-known persistent optical illusions which a human cannot dispel even when she knows it is an illusion, involving the length of line segments, brightness of colors, straightness of lines, and distance of objects. Random-dot stereograms are another form of optical illusion. Similarly, it is possible to create the auditory illusion of a tone sequence that rises forever, while actually it has only 12 distinct sounds.

The scientist cannot make something appear where there is nothing, nor make something invisible. The technique usually involves manipulating the scene that the object appears in, and so cannot usually be done with moving objects. Possible effects include making the larger of two doorways appear to be the smaller, making two objects of unequal brightness appear the same, or making a sword appear shorter than it is.

- Create static 2D illusions.
- Create static 3D illusions.

#### Implant Idea

- Implant an emotion, such as fear, hatred, or lust.
- Implant a specific idea.
- Implant memory of events that never occurred (D2).

**Mental Block (D1):** The subject is unable to feel an emotion, or to contemplate an idea or event. See *Implant Idea* for difficulties.

**Mind Merge (complexity 2, D5):** Make a new mind that has the memory and experience of two minds. The original two remain (unless readout is destructive). Add five plus the dissociations of the two original minds to get the dissociation of the merged mind. The merged mind has a rating in any given discipline equal to the maximum of the ratings of the original minds, and a willpower equal to the minimum of the original two. Whenever the two personalities struggle for control, each rolls their original willpower, and the one with the most successes wins.

- Merge AIs with clean architectures (e.g. symbolic).
- Merge minds from hardware brains.
- Merge minds from wetware brains. Specify technique.

**Prevent Memory (cogsci 2):** Prevent the brain from forming new memories. A botch may make the effects permanent, or may simply fail. It will not be apparent until an hour after application whether this technique worked or not.

**Injection:** Inject a c-AMP inhibitor into the subject's hippocampus. Duration about half an hour.

**Oral (medicine 4):** Drug carried in liposomes that can cross the blood-brain barrier. Duration half an hour.

**Nanite:** Duration at scientist's discretion.

**Read Mind:** A polygraph or a functional MRI scan may suffice to read an emotion, but anything more specific requires invasive techniques. Information may be retrieved from long-term memory post-mortem if the body is frozen.

- • • Read an emotion.
- • • • Read a word.
- • • • • Read a complete thought.

**Reassociate (cogsci 4):** By strengthening certain thought patterns, the effects of dissociation on the subject can be diminished. This tends to affect the subject's personality, making him more of an automaton, so the subject loses one dot in charisma for each point of dissociation removed. A botch may increase dissociation. The cognitive scientist may do this himself with mental discipline, but needs neurosurgery to affect others.

**Spurious Logic:** Humans do not use deductive logic or Bayesian probability judgements, but similarity judgements, and so make certain consistent errors. For instance, if people are told that Cindy was politically active in college, they will say that it is more likely that Cindy is a bank clerk and a feminist than that Cindy is a bank clerk.

A cognitive scientist can use these weak points to construct an argument that appeals to a human but is actually fallacious. Add the scientist's cogsci rating to all manipulation rolls.

**Upload:** Upload the subject's mind onto different hardware, typically a computer or robot, but possibly another human brain. Usually called "downloading" when from hardware to wetware. This can be used to make backups of a person, or swap minds between bodies. See *Dissociation* for dissociation penalties. Note that you cannot transfer a human mind to, say, a wolf's brain without losing language, memory, and intelligence.

If a player character is uploaded, the player now controls both the original and the duplicate. If the upload is stored as data, and is later downloaded into a body like the player character's original body, the resulting player character will be just like the original and suffer no dissociation penalty. This can be used for backing up a character before attempting some difficult cognitive science effect. However, it is very hard to tell if a backup is flawed.

- • • • Upload to computer.
- • • • • Upload to organic brain.

## Complexity

**Animat:** Build an autonomous creature.

- Build a Lego robot from a kit.
- • Build a large metal insect capable of finding food, attacking intruders, etc.
- • • Build a group of insects that can cooperate to herd creatures, move heavy objects, etc.

**Computer Virus:** Viruses can be used to gather information. Getting the information back is the trick. If you send it back to one address, anyone who discovers the virus can find your Ubertnet address. You may use anonymous remailers, but they usually allow only a limited number of messages per userid. You may spam the network with encrypted messages and pick them up, but this makes detection more likely.

- Create an ordinary PC virus.
- • Virus can thrive on the Ubertnet.
- • • Virus can evolve resistance to immune systems.

**Immune System:** The character can create a computer immune system capable of detecting and destroying viruses, parasites, worms, and other invaders. A botch means it will occasionally attack the user's data, or may spread over the Ubertnet attacking everything.

- • Create an immune system for an operating system that has at least a firewall between itself and the Ubertnet.
- • • Create an immune system for a process that travels the Ubertnet.
- • • • Create a nanite immune system against unknown nanites (nano 3).

**Pattern:** Complexity allows a scientist to understand the causal relations in a changing system such as an economy, an ecosystem, or the weather. A botch in disrupting the weather might produce a hurricane; a botch in creating a new equilibrium in the weather might bring a new ice age in ten years. The difficulty depends on the forces the character can bring to bear on the system. Disrupting a local ecosystem with a bulldozer might be difficulty 6, whereas disrupting the global economy with \$1 million would be difficulty 10. Disrupted patterns will usually return to their original state eventually, but may enter a new equilibrium.

With the appropriate medical techniques, this may be applied to organisms. Restore Pattern can be used with a computer-controlled electronic implant to prevent epileptic seizures or heart attacks. If the character has Psychology 2, it can be used in psychoanalysis to cure psychosis; Restore Pattern with Cognitive Science 3 can cure even organic insanity.

- Detect disruption.
- • Disrupt pattern.
- • • Restore disrupted pattern.
- • • • Create new equilibrium.

**Simulation:** The scientist can program a simulation that will predict how a system will behave. The simulation must be given current information about the system's state. In the case of simulating a human, someone must work with the knowledge engineer who knows the subject well — well enough that that person will be able to predict the subject's actions better than the program will. The simulation is useful because it can be used by other people in other places.

- • Predict weather several days ahead of time.
- • • Predict the economy.
- • • • Simulate a person (cogsci 4).

## Genetic Engineering

All genetic engineering requires a great deal of laboratory equipment.

**Alter Lifeform:** This is the ability to reengineer an organism's genetic code. Crossing takes genetic material from one organism (such as a gene for resistance to ampicillin) and inserts it in another. Reengineering means the insertion of a gene designed by the scientist. Most engineering is done on gametes or zygotes, but advanced genetic engineers (rank 3) can alter fully developed organisms through the use of weakened retroviruses, which infect the organism and insert their DNA into its cells. Retroviruses are very small, so the amount of information they can contain is limited (rarely more than  $10^4$  base pairs, vs.  $3 \times 10^9$  bp in a human) – large enough to do a level 3 morph, but nothing more involved. A retrovirus may be inserted anywhere in the DNA, such as in the middle of an anti-oncogene, triggering cancer. A type of adenovirus (AAV) is safer, since it always inserts itself in the same place on chromosome 17. Botches with AAV should be less severe than with a retrovirus; characters are fortunate if they have access to it. Regeneration (below) is a type of level 3 Alter Lifeform; more radical changes require geneng 4.

- Cross or reengineer bacteria. Cross plants.
- • Reengineer plants. Cross animals within a taxonomic family (i.e. mammals).
- • • Reengineer animals.

**Clone:** Clones mature at normal rates, and do not have any of the memories of the creature they were cloned from. Clones and designer clones (see Morph) are often intended to use for downloading. Some people call this murder.

- Clone reptiles.
- • Clone mammals.
- • • Rapid clone: Design clone to mature at 10x normal speed.  
May opt to slow aging after reaching maturity.

Cloneliness is next to godliness.

— Steve Taylor

**Immortality:** A human can provide better error-checking and error-correcting mechanisms for DNA, eliminate telomere shortening, and alter her biochemistry to be less damaging to cells (e.g. by increasing superoxide dismutase levels).

- • Slow aging by a factor of 2 (D1).
- • • Halt aging (D2).
- • • • Restore youth (D3).

I don't want to live on in my works. I want to live on in my apartment.

— Woody Allen

**Morph:** The different types of cell in a body are each different stable states of gene activation and repression of the genome. A geneng can design an organism which has cells with more than one stable state, so that a hormonal signal will switch all the cells into a different state. This can be used to produce a body capable of shapeshifting under stress or by conscious volition. Growth of the body can be at 10x normal rate.

A level 3 Morph can be done to an existing body via retrovirus. Lifeform). It can make changes that involve changing some genes or deactivating large sections of genome, but cannot insert much genome. Changing a female to a male is rated level 4 not because males are a more advanced lifeform, but because the entire Y chromosome must be introduced. Changing human to apelike is rated easier than changing ape to human under the assumption that we evolved from apelike creatures and hence still have their genes. Also, making a change irreversible to a rank 3 player should make for more interesting play.

Morphs between species with wildly different biochemistries (e.g. mammal to reptile) are not possible.

- • •      Designed humanlike being can morph between different races, sexes, or builds. Retrovirus can change male to female, human to apelike.
- • • •     Morph between similar animals, e.g., mammals.
- • • • •    Morph between 3 different forms.

**Regeneration (geneng 3, D1):** An organism that does not ordinarily regenerate severed limbs can be altered so that it does. This happens at ordinary growth rates.

**Viruses:** The gengineer can design viruses. The purpose of these virii may be to kill, to weaken, or to insert some DNA.

- Can alter a virus to resist specific antibiotics.
- •         Can design a virus to kill or sicken, which will evolve to resist cures.
- • •       Can target a virus to any specific individual given a DNA sample, without endangering carriers. Virus may do a level 3 Morph.  
Green virus: Inhibits reproduction.
- • • •     Can target a virus to a specific genetically-related group, such as a family or race, without endangering other carriers.

## Nanotechnology

**Nanites** Nanites are machines that typically measure microns (one one-millionth of a meter) in each dimension. A dumb nanite has no onboard computer, and can only move randomly and catalyze chemical reactions. A smart nanite has a nanocomputer that gives it insect intelligence. A molecular mill is a larger nanite that can build 1000 dumb or 100 smart nanites per second. A nanoassembler can self-replicate 10 times per second.

Humans need a macrointerface to control nanites. This is any method that will let signals made by macroobjects (things big enough to see) be interpreted by nanites. They can receive radio signals or soundwaves. Drops of chemicals in solution can be used when the number of possible signals are small.



The best solution is to have a brain built using nanotechnology that can build nanites merely by thinking about it. A compromise is to have a keyboard or other input device that is physically linked, possibly through a series of progressively smaller sensors and activators, to nanoassemblers.

The crucial point is that no one can build a nanite without a nanoassembler. The first nanoassemblers were built by the Japanese and American governments, by large research teams that were a kind of Manhattan Project for the 21st century. An independent nanologist cannot duplicate their effort. So a budding nanologist must serve as apprentice to some established nanologist, who will eventually build him his first nanoassembler and macrointerface.

If you know what materials a group of nanites use as their fuel or raw materials, you may be able to starve them. They may “die” or just become inactive, depending on how they are designed.

- Detect nanites. Program nanite (given a macrointerface to it). Create dumb nanite.
- • Deduce the chemical reactions used by a group of nanites. Create molecular mill.
- • • Create nanoassemblers.

**Diamond Skin (nano 3, D1):** Create a layer of material under the skin (with holes for blood vessels) made from the same type of carbon-carbon bonds as diamond. Character is invulnerable to puncture wounds.

**Goo:** Goo is a reproducing nanite swarm that is set loose upon the world, often to destroy something completely, a kind of material genocide. It’s called goo because that’s what it leaves behind. Creating a goo requires having one nanoassembler that you can program, but given that even low-level nanoengineers can create goo. Biogoo breaks down high-energy bonds, such as the ADP-Pi bond in ATP, or the C-C bonds in fat. Grey goo breaks down even low-energy bonds, and could be designed to disassemble all iron objects. 2-stage goos have one stage which eats some fuel source (generally biological), reproduces, and produces the second stage nanites, which travel (often wind- or water-borne) in search of their target. 1-stage goos can derive their energy from their target, and so destroy and reproduce in the same place. A person who is attacked by a 2-stage biogoo need only leave the goo-contaminated area and the nanites on him will soon run out of energy; a person attacked by 1-stage biogoo is in serious trouble. There is no such thing as 1-stage grey goo, since breaking low-energy bonds does not provide surplus energy. Green goo is species-specific 1-stage biogoo, “green” because in the old days, some radical environmentalists might have wanted to try it out on Homo sapiens. It is essentially a tough, fast-reproducing, nonorganic virus.

Hayflick goo is designed to reproduce only a certain number of times, so that it doesn’t run out of control. But despite the best intentions, botches with goo are very, very bad. Just about anyone who thinks you are designing goo will drop whatever they are doing to kill you.

Players should specify exactly what their goo’s target is, and what its food source is. A botch might consist of goo that reproduces out of control, or uses a different food source. Say Arakta, who lives in the Canadian northwoods, hates the clouds of mosquitos that descend on him at twilight. He designs a green goo for them. He botches. He accidentally contaminates the target DNA he gives to the goo with his own DNA. Say that Horace, who hates computers, designs a gray goo to dissolve silicon-silicon bonds. He botches. The Storyteller looks at the periodic table of elements for something similar to silicon. She sees that carbon is in the same column, one row above. Horace, a carbon-based life form, had better stand back when he releases his goo.

Goo is made of very small nanites, so a layer two atoms thick is enough to protect a target. Grey goo aimed at iron would not dissolve a car, since it is protected by paint and rust. Just don’t

scratch the paint.

- **2-stage biogoo**
- •         **2-stage grey goo**
- • •       **1-stage biogoo**
- • • •     **Green goo**

**Milliman (nano 5  $\wedge$  bio 4  $\wedge$  complexity 4, D4):** Build a body a few centimeters tall with the functionality of a human body. Requires Nanobrain (an additional D4).

**Nanobrain:**

- •         **Datajack (cogsci 3):** Can plug in data modules or network connections (including connections to other people's datajacks). (D2)
- • •       **Associative memory (cogsci 4):** Can recall any item from data module or actual experience instantaneously. Knowledge in data modules is added to Knowledges (but not to Disciplines). (D3)
- • • •     **Nanobrain (cogsci 4):** Build a brain equivalent to your original, with all your memory, but 1 mm<sup>3</sup> in size, operating at 10 times normal speed, and resistant to shock. Add 3 to Perception, Wits, Alertness, and Dexterity. (D4)
- • • • •   **Gigabrain (cogsci 5):** Set Perception, Intelligence, and Wits at 10. (D6)

**Nanobuild:** Given a design, a nanoassembler, a fuel source, and the proper atoms, the nanologist can build just about anything.

- Purify raw materials, e.g. metal from ore.
- •         Build solid objects made of crystal.
- • •       Build plastics and other tricky structures.
- • • •     Star Trek's replicator.
- • • • •   Star Trek's transporter.

**Nanocomputer (nano 3  $\wedge$  comp sci 3):** Build a computer performing 10<sup>16</sup> instructions per second, measuring 1mm in each dimension and requiring 1 watt of energy. Or, build many of them. Build an entire building of them, if you can provide the energy and heatsink. Memory units store up to 1T (10<sup>15</sup> bytes) per mm<sup>2</sup>.

Destroying information generates heat. Thus, a nanocomputer is built to use reversible computation: each instruction is reversible. After a computation, the nanocomputer must take as much time and energy as was taken by the computation to "unwind," undoing each instruction in reverse order, until it is restored to its initial state. The speed of computation determines the heat production. The better heat-dissipation a nanocomputer has, the faster it can be run. If it is set to full speed without rapid heat dissipation, it becomes a bomb.

**Nanohand (nano 4, D3)** Construct an arm which is structured like a fractal tree: it consists of one arm of length n, at the end of which are 2 arms of length n/2, at the end of each of which are 2 arms of length n/4, et cetera down to arms made of nanofibers. It can manipulate objects at both macro- and nano-scale. With biology 5, this can be grafted onto a human. With complexity 2, all the end extensions can be used together in a serial-instruction multiple-data (SIMD) program. One

such program could tear apart any substance not made from strong molecular bonds (e.g. skin). With complexity 3, they can follow a multiple-instruction multiple-data (MIMD) program. One such program might open up a patient for surgery, and heal the wound afterwards. Sterilization of the hand would be a problem, since intense heat could destroy the finest arms. Once the tiny ends are destroyed, a nanoassembler is needed to rebuild them.

**Nanoman (nano 5  $\wedge$  geneng 4  $\wedge$  complexity 4, D7):** Build a body made of nanoassemblers. Such a body can change shape and color in seconds. If fragmented, the fragments can find their way together. (Think of the new terminator in T2.) It can use nearby materials to make itself larger. It can split into several bodies. It can replicate itself this way. It can program and release nanoswarms or goo for various tasks, such as infiltrating, reading, and changing minds. Given time to prepare an outer shell, it can tolerate extreme heat for a short period of time. It can tolerate extreme cold indefinitely. Note that if it has an organic brain, this brain cannot change shape nor reform after destruction.

**Quantum Computer (nano 4  $\wedge$  comp sci 3):** Can construct a computer which, by a process of superposition of quantum states, can factor any number in a short time — even one generated by a nanocomputer. Makes brute force cryptographic attacks possible on any encryption algorithm, such as RSA, that relies on the difficulty of factoring large primes.

**Utility Fog:** I am unconvinced that utility fog nanites can have sufficient power to act as utility fog is supposed to (e.g., the Star Trek holodeck). You may allow it at your discretion.

## Artifacts

### Computers

People hunted down and destroyed all large computers, but many PCs escaped destruction. Academics treasure every one, from the Intel Septium down to the TRS-80. Even broken computers are valued if their components are common, since chips do burn out.

### The Cray Z

Rumor has it that Seymour Cray and K. Eric Drexler cooperated shortly before the Apocalypse on the construction of a nanocomputer capable of performing  $10^{19}$  instructions per second, measuring .5mm in each dimension and requiring .5 watts of energy. Prototypes may exist.

### Library of Congress

Before the Apocalypse, many companies came out with enormous multimedia collections of books, pictures, music, films, and databases. These were usually stored in crystals or on photorefractive polymer sheets, and are retrieved by holographic lasers. Any archive with over one terabyte ( $10^{15}$  bytes) of data is called a Library of Congress.

The entire contents of the Library of Congress never were entered into computers. But there are rumored to be crystals with a large percentage of recent (pre-Apocalypse) publications on them.

### **The Philosophers' Stone**

The legendary stone or chemical preparation that transmutes base metals into gold. Some say it was found before the Apocalypse and helped trigger war; others say an Uberman created it as a joke.

### **Portals**

A "portal" looks like a set of three or four thumbtacks connected in a triangle or square shape. When they are stuck into an appropriate wall, they will slide in smoothly even though it be as hard as diamond. Then they can be pulled apart and moved around on the surface of the wall. A window will open between the portals. Some 'portals' create openings, others only a transparent but solid window. Portals for isolation walls look like a cross between thumbtacks and fencing foils.

A portal can only be removed from a wall on the side on which it was inserted. The doorless structures build by Ubermen have become tombs to more than one adventurer who entered using a portal, which was then stolen by a watcher outside.

### **The Santa Fe Institute Studies in Complexity**

The Santa Fe Institute published a series of books on Complexity, such as the famous Artificial Life volumes. Reading Volume 1 can raise one's discipline ratings up enough to raise to level 1 in Complexity; reading volumes 1 and 2 brings one's rating to level 2, and so forth. Possession of them is punishable by death.

### **Other**

Stereos, VCRs, rechargeable batteries, digital watches, solar calculators, plastic containers, nuclear warheads, and all sorts of other products of old technology are highly prized. Most devices are not outlawed as long as they are original pre-Apocalypse, not duplicates.

# Chapter 4

## Rules

### Using the Ratings

The particular system is not important. *Men Like Gods* is designed to be compatible with White Wolf's Storyteller system. The most Storyteller-like way would be to use the dice rules for rolls involving attributes, skills, and disciplines, while using the diceless rules for technological capabilities. I encourage using dice for technologies, since the botches are so much fun.

### Diceless

A character can accomplish any effect no higher than her rating in that area.

### Dice

When a character attempts a task involving a discipline or technology, she gets twice as many 10-sided dice as she has dots (*not* discipline+intelligence). If it is not discipline-related, choose one attribute and one skill appropriate to the task, and add their ratings to get the dice pool.

In this manual, abilities are listed by rating in disciplines or technologies. The dice difficulty of a task is its level plus 5. So decrypting a file, which in diceless play requires a math rating of 4, has a dice difficulty of 9.

The player rolls the dice, adds the number of dice greater than or equal to the dice difficulty, and subtracts the number of ones. This is the number of successes. Usually only one is required. If the number of successes is negative due to 1s, the roll is a botch, and something bad happens. Every time the character tries again, the difficulty increases by at least one.

Before making a roll, a character can declare that she is spending one willpower point, which will add one to her number of successes. Willpower is regained between sessions, or during play by accomplishing something one regards as important. This may come from your sect: an anarchist could regain willpower for improving the efficiency of a farming operation.

Under these rules, a character with one dot in a technology has the same chance of succeeding at a level 5 ability (difficulty 10) as a character with five dots. To remedy this, don't allow a character to try an effect more than one or two levels above the character's rating. You may also change difficulty 10 to difficulty 9.5: every 9 that the character rolls gets rolled again, and if it comes up 5 through 9, it counts as a success.

## Combat

Use the Storyteller combat system: At the start of combat, each combatant rolls (Wits+Alertness) 10-sided dice, and characters act in decreasing order of their number of successes. To attack, roll some dice (see table), usually difficulty 6. If you achieve any successes, roll the number of dice given under “damage”, difficulty (6 + armour rating). The number of successes is the number of health levels of damage inflicted. Standard Storyteller rules allow the target a soak roll of (Stamina) dice, and each success (difficulty 6) subtracts one health level from the damage. *Men Like Gods* instead adds your Stamina to your health levels. This is because I was tired of watching characters take .45 slugs to the head at point blank range without taking damage.

When a character is injured, every roll the character makes will lose a number of dice equal to the negative number given in the last-checked Health level (see *Character Generation*).

Weapon	number of dice to hit	number of dice for damage
Hands	dex+brawl	strength
Club	dex+melee	strength × 2
Knife	dex+melee	strength × 3
Gun	dex+firearms	16
Bow, spear	dex	16

Weapons more powerful than guns kill if they hit. It is easy to die in *Men Like Gods*. So you shouldn't try to kill for something unless you're willing to die for it.

The system becomes more complex with old technology. Certain materials (e.g., Diamond Skin) offer protection against certain weapons. If you have a battle in which you have several copies of yourself and dozens of animats, you don't want to track health levels for all of them. The Storyteller may decide to use the “one bullet, one kill” system: if a creature is hit with a weapon that is lethal to it, it dies; if hit with a non-lethal weapon, it is knocked out. An advanced Uberman is almost impossible to kill anyway since he can keep hidden backup copies of himself.

## Character Generation

If you plan to play with the same people again and again, your characters need some reason to stay with their characters. It will help to develop a group concept before you develop your character concept. That is, what is the group's purpose? If it is to achieve immortality, the group might consist of natural scientists funded by a financier.

Individuals might have goals beyond that of the group. One character might be HIV+, and believe there is a cure that has been suppressed by the Inquisition. A priest might gather old works of theology to see whether the Church is really following the dictates of the old councils and Popes that it claims to derive authority through.

## Statistics

You start with a rating of 1 in each **attribute**. There are three attribute categories: physical, social, and mental. Add 7 dots in one category, 5 in another, and 3 in the remaining category. Roll 1d10. If you roll a 1, you are one of the Beautiful People, and must add 1 dot to each category. Give yourself 4 **willpower** points. Put 5 dots in **backgrounds**. Spend 50 free experience points on **talents, skills, and knowledge**, 24 on **disciplines** (28 if you are a priest or registered academic), and 20 wherever you like (see chart under *Advancement*). You may add other skills, e.g., Horsemanship.

At creation, a background costs 3 experience points. Fill in your health levels as follows:

Stamina	Health levels
1	-0 -1 -2 -3 -5 Incapacitated Dead
2	-0 -1 -2 -2 -3 -5 Incapacitated Dead
3	-0 -1 -1 -2 -3 -4 -5 Incapacitated Dead
4	-0 -1 -1 -2 -2 -3 -4 -5 Incapacitated Dead
5	-0 -0 -1 -1 -2 -3 -4 -5 Incapacitated Dead

Don't get obsessed with ratings. In a well-designed *Men Like Gods* story, knowledge is power, not dots in an attribute.

## Advancement

Academics advance by acquiring knowledge, usually in the form of books, experiments, or instruction by NPCs. Financiers prefer to acquire money and academics. Survivalists like artifacts, especially weapons. These are all gotten during roleplay. It would not make sense for a priest to learn five different languages by killing survivalists, even if they were multicultural.

Academics may learn from books between adventures. Between each adventure, each book may be read by only two characters. Each character may read only one book in each discipline, and at most two books total (except with Fast Learn). Books cannot advance a character beyond a rating of 4. Beyond that, only research and private instruction will suffice. Books written before the Apocalypse cannot educate an academic beyond a rating of 3.

Player characters may loan books to each other, but they cannot teach each other. They are too busy leading their regular lives. Alternately, you can roleplay this: Say Ron's character has three dots in biology, and Hsu's has one. Ron can find an article on cell biology in *Scientific American*, give it to Hsu, and make up a 2-minute quiz which the storyteller will administer at the start of the next session. The storyteller may change questions. If Hsu passes, his character gets the second dot.

Attributes and skills are improved by practice. Any time you achieve an important goal by using an attribute or skill, you have the following percent chance of increasing your rating by one. (For combat, you may only roll once per fight.)

Rating	% chance for raising attribute	% chance for raising skill
0		40
1	10	30
2	5	20
3 & above	2	10

If books and tutors bore you, you can use the following chart to purchase attributes:

Rating	Cost
Attribute	current rating $\times$ 4
New skill	2
Skill	current rating $\times$ 2
New discipline	4
Discipline	current rating $\times$ 4
Willpower	2 (at Storyteller's discretion)

## Chapter 5

# Storytelling

Books are powerful. Other academics are bound to have books stored in some form. Resist the temptation to let the players kill an opposing academic, raid his library, and advance rapidly. This is the *Men Like Gods* equivalent of gaining levels by trouncing monsters. Let each NPC's library have books in only one or two disciplines. Make reading the books a challenge. They may be encrypted, or on microfilm, or encoded in a crystal so that only a nanodevice can read them, or written in a foreign language.

Being one of the Beautiful People is not supposed to be an advantage. Hint to a player with such a character that she is in danger of detection. If she doesn't take precautions, let the accusations fly.

The world is a world of mystery. Players are going to read this manual too, so instead of us specifying how everything *really* is, we will suggest a few alternatives and let the Storyteller choose.

## Magic

Alchemists, astrologers, and theologians may think they benefit from magic. Their abilities are designed so that they can never be sure whether they really work or not. You could state up front that your world will or will not have magic, but why give the players that assurance? Give astrological revelations in cryptic terms that cannot be falsified. You may have a story in mind explaining how an Uberman is generating the magical effects as an experiment in psychology, or because she finds magic beautiful.

"But," someone objects, "what if after studying occult theology for most of a campaign, a player discovers it doesn't really work?" Gee, that would be almost like real life, wouldn't it?

## Earth, and Why it's Still Here

Given that there are Ubermen with godlike powers, why hasn't everyone been reduced to slavery at their fractal hands? Here are some possible reasons:

1. God protects us from them.
2. The Church and state protect us.
3. The Ubermen have declared Earth to be a nature preserve.



4. Watchers defend the Earth from resource-hungry Relativists.
5. Earth is too inaccessible at the bottom of its gravity well.
6. We already are slaves of the Ubermen.

## Variations and Inspirations

The worlds in J. G. Ballard's *The Drowned World*, Walter Miller's *A Canticle for Leibowitz*, Gene Wolfe's New Sun series, David Brin's *The Postman*, Frederik Pohl's *Gateway*, and Steven King's *The Stand* and *The Dark Tower* all have something in common with this world, and can suggest adaptations and plot elements.

## Chronicles

A *Men Like Gods* scenario requires forethought. Only a very gifted storyteller can make it up as she goes along. Because of the emphasis on old technology and knowledge, the storyteller must as a minimum decide what is out there waiting to be found, and what it can do.

For a one-shot adventure, you may let the players generate characters with 8 initial discipline points. For a long chronicle, give them only 4 initial discipline points. The players may complain that they have no special abilities. It's your job to make a scenario that is interesting without special abilities.

## The Noble Quest

If your players like *AD&D* and *Vampire*, they can just create a bunch of characters and set them in motion, possibly to intrigue against each other. But if they like *Call of Cthulhu* and *Werewolf*, they may want more group cohesion, and a heroic goal to pursue. For instance:

- The Mouse and the Elephant: The Watchers are failing, and the players must help them save the Earth from Relativists, who wish to enslave us / steal our oxygen or water / break the Earth up into convenient bite-sized asteroids. The players' only strength is their obscurity.
- Crazy Weather: The weather is fluctuating rapidly. It is on a saddle point in the space of stable attractors, and may slip into a new ice age or a new Jurassic within the decade.

## The Underground University

Academics of all orders participate in the underground university. Some gather secretly in deep forests or blasted cities. Those more fortunate have hidden communication networks (sometimes with Ubrnet access) and share encrypted information through anonymous repeaters. The characters may be "attending" a college together which comes under attack from the Inquisition. Or they may try to found a new college.

## Money For Nothing

Money is always a problem for academics. Perhaps your characters have formed a business using their knowledge for odd jobs. How can they do the job without revealing their illicit knowledge?

## **Renegade Uberman**

Every now and then an Uberman appears who thinks his powers are so great that he can display them openly or use them recklessly. If the Church and the Inquisition are unable to control such a being, they may root out members of the Underground and bargain with them to do it. Such bargains often turn out to be one-sided.

The renegade may not be particularly powerful, just foolish. Some kid who has just learned how to design his own nanites may use them carelessly for financial gain or trivial tasks, not appreciating the danger. Perhaps he can be recruited ... or assimilated.

## **X Marks the Spot**

During the Cultural Rebirth, many academics cached their libraries and equipment. The characters may learn where one is hidden. Just hope some crazy Sharer hasn't blabbed it all over the Net. If it's widely known, there must be some reason it hasn't been claimed yet.

## **Backup Error**

The most powerful Ubermen keep hidden backup copies of their minds, which will be automatically activated if not signalled periodically (say, if not sent an encoded radio message). One of a player's backups might be activated prematurely.

## **White Wolf**

*Men Like Gods* is compatible with Storyteller systems. If you're willing to put up with magic, you can drop a character into the World of Darkness without mussing his hair. If you're the Storyteller, teach your players not to scorn every creature with no Aura, Umbral presence, or Quintessence. Perhaps that agent of DNA is a rank 4 genetic engineer... Note that there are no willpower rolls against technological attacks.

# Recommended Reading

## Artificial Life

### Light reading

Steven Levy (1992). *Artificial Life: A report from the frontier where computers meet biology*. NY: Random House. 390 p. A fascinating overview of artificial life, drawn almost entirely from [Langton 1989] and [Langton et. al. 1992]. 390 p.

### Heavy going

Rodney Brooks and Pattie Maes (1994). *Artificial Life IV*. Cambridge, MA: MIT Press.

Philip Husbands, Jean-Arcady Meyer, and Stewart W. Wilson, eds. (1994). *From Animals to Animats 3: Proceedings of the third international conference on simulation of adaptive behavior*. Cambridge, MA: MIT Press. 508 p.

Chris Langton, ed. *Artificial Life*. Quarterly (in intent if not in execution) journal published by the MIT Press.

Chris Langton, ed. (1989). *Artificial Life*. Addison-Wesley, Redwood City, CA. 655 p.

Chris Langton, ed. (1994). *Artificial Life III*. Reading, MA: Addison-Wesley. 599 p.

Chris Langton, Charles Taylor, J. Dooyne Farmer, and Steen Rassmussen, eds. (1992). *Artificial Life II*. Addison-Wesley, Redwood City, CA. 854 p.

Jean-Arcady Meyer and Stewart W. Wilson, eds. (1991). *From Animals to Animats: Proceedings of the first international conference on simulation of adaptive behavior*. Cambridge, MA: MIT Press. 562 p.

Jean-Arcady Meyer, Herbert L. Roitblat, and Stewart W. Wilson, eds. (1993). *From Animals to Animats 2: Proceedings of the second international conference on simulation of adaptive behavior*. Cambridge, MA: MIT Press. 523 p.

John von Neumann (1966). *Theory of self-reproducing automata*. Edited and completed by Arthur W. Burks. Urbana, IL: University of Illinois Press.

Francisco J. Varela and Paul Bourguine, eds. (1992). *Toward a Practice of Autonomous Systems: Proceedings of the first European conference on artificial life*. Cambridge, MA: MIT Press. 550 p.

## Genetic Algorithms

R. K. Belew and L. B. Booker (eds.) (1991), *Proceedings of the Fourth International Conference on Genetic Algorithms*, San Mateo, CA: Morgan Kaufmann.

Stephanie Forrest (ed.) (1993), *Proceedings of the Fifth International Conference on Genetic Algorithms*. San Mateo, CA: Morgan Kaufmann. 665 p.

David Goldberg, Kelsey Milman, and Christina Tidd (1992). "Genetic algorithms: A bibliography." IlliGAL report no. 92008. Urbana, IL: Illinois Genetic Algorithms Laboratory. Available via ftp at anonymous@gal4.ge.uiuc.edu in /pub/papers/IlliGALs/92008part\*.ps.Z.

J. J. Greffenstette (1985). *Proceedings of the First International Conference on Genetic Algorithms and their Applications*. Lawrence Erlbaum.

J. J. Greffenstette (1987). *Proceedings of the Second International Conference on Genetic Algorithms and their Applications*. Lawrence Erlbaum.

John Holland (1975). *Adaptation in Natural and Artificial Systems: An introductory analysis with applications to biology, control, and artificial intelligence*. University of Michigan Press, Ann Arbor. Reprinted in 1992 by Bradford Books/MIT Press. 228 p.

John Koza (1992). *Genetic Programming: On the programming of computers by means of natural selection*. Bradford Books/MIT Press. 840 p.

John Koza (1994). *Genetic Programming II: Automatic discovery of reusable subprograms*. MIT Press. 746 p.

J. David Schaffer, ed. (1989), *Proceedings of the Third International Conference on Genetic Algorithms*, San Mateo, CA: Morgan Kaufmann. 445 p.

## Cognitive Science

### Light reading

Jerry Fodor (1983). *The Modularity of Mind*. Bradford Books/MIT Press. 145 p.

Stephen Kosslyn (1992). *Wet Mind*. NY, NY: Maxwell Macmillan.

Marvin Minsky (1985). *The Society of Mind*. NY, NY: Simon and Schuster. 338 p.

### Heavy going

John R. Anderson (1983). *The Architecture of Cognition*. Cambridge, MA: Harvard University Press. 345 p.

Allen Newell (1990). *Unified Theories of Cognition*. Cambridge, MA: Harvard University Press.

*Artificial Intelligence*. Amsterdam: North-Holland Pub. Co. Monthly.

*Biological Cybernetics*. Berlin; NY, NY: Springer.

*Brain and Behavioral Science.*

There are many introductory cognitive science and AI texts.

## Complexity

### Light reading

Robert Axelrod (1984), *The Evolution of Cooperation*, NY, NY: Basic Books. 241 p. An excellent study of the prisoner's dilemma.

Kevin Kelly (1994). *Out of Control: The rise of neo-biological civilization*. Reading, MA: Addison-Wesley.

Roger Lewin (1992). *Complexity: Life at the edge of chaos*. NY: Collier/Macmillan. 208 p. An excellent nontechnical introduction to complex systems.

M. Mitchell Waldrop (1992). *Complexity: The emerging science at the edge of order and chaos*. New York NY: Simon & Schuster. 380 p. An excellent nontechnical introduction to the world of the Sante Fe Institute.

### Heavy going

Gregory L. Baker and Jerry P. Gollub (1990). *Chaotic Dynamics: An introduction*. Cambridge University Press. 182 p. A good introductory textbook to chaos theory.

Stuart A. Kauffman (1993). *The Origins of Order: Self-organization and selection in evolution*. Oxford University Press. 709 p. Outstanding.

Gregoire Nicolis and Ilya Prigogine (1977). *Self-Organization in Nonequilibrium Systems : From dissipative structures to order through fluctuations*. New York: Wiley.

Bruce H. Weber, David J. Depew, and James D. Smith, eds. (1988). *Entropy, Information, and Evolution*. Cambridge MA: MIT Press.

## Genetics

Benjamin Lewin (1990). *Genes IV*. Oxford University Press. 857 p.

## Nanotechnology

### Light reading

K. Eric Drexler (1986). *Engines of Creation*. Garden City, NY: Anchor Press/Doubleday.

K. Eric Drexler (1991). *Unbounding the Future*. NY, NY: William Morrow and Co.

## Really heavy going

K. Eric Drexler (1992). *Nanosystems*. NY, NY: John Wiley & Sons. 556 p.

## Transhumanism

### Fiction

Vernor Vinge (1992). *A Fire Upon the Deep*. NY, NY: Tor. 613 p. Hugo winner.

Walter Jon Williams (1992). *Aristoi*. NY, NY: Tor. 448 p.

### Light reading

Hans Moravec (1988). *Mind Children : The future of robot and human intelligence*. Cambridge, MA: Harvard University Press.

Max More, ed. *Extropy: The journal of transhumanist thought*. Published quarterly by Extropy Institute, 13428 Maxella Ave., #273, Marina Del Rey CA 90292. Email [more@extropy.org](mailto:more@extropy.org)

Name:  
Nature:

Age:  
Demeanor:

Occupation:  
Sect:

### Attributes

#### Physical

00000 Dexterity  
00000 Stamina  
00000 Strength

#### Social

00000 Appearance  
00000 Charisma  
00000 Manipulation

#### Mental

00000 Intelligence  
00000 Perception  
00000 Wits

### Talents

00000 Alertness  
00000 Athletics  
00000 Brawl  
00000 Dodge  
00000 Intimidation  
00000 Subterfuge

### Skills

00000 Enigmas  
00000 Firearms  
00000 Leadership  
00000 Melee  
00000 Performance  
00000 Repair  
00000 Woodcraft

### Knowledge

00000 Etiquette  
00000 Investigation  
00000 Law  
00000 Occult  
00000 Politics  
00000 Security  
00000 Streetwise

### Disciplines

00000 Anthropology  
00000 Biology  
00000 Chemistry  
00000 Computer Science  
00000 Economics

00000 Engineering  
00000 Linguistics  
00000 Literature  
00000 Mathematics  
00000 Medicine

00000 Physics  
00000 Philosophy  
00000 Psychology  
00000 Theology

### Technologies

00000 Cognitive Science

00000 Genetic Engineering  
00000 Complexity

00000 Nanotechnology

### Backgrounds

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### Willpower

0 0 0 0 0 0 0 0 0 0

### Dissociation

0 0 0 0 0 0 0 0 0 0  
0 0 0 0 0 0 0 0 0 0

### Health

0 -0 Bruised  
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