

# WHAT IS WEIRD SCIENCE?

BY CAL GODOT

*GURPS Fourth Edition* defines Weird Science as a skill that enables the character to devise “crackpot scientific theories that are far ahead of their time. . . or at least utterly different from the usual assumptions of your tech level.” This broad description might seem to include the “punk” technological variations like steampunk or dieselpunk. But weird science is something beyond mere technological divergence, far more than a clever TL5 Victorian engineer devising new uses for TL6 steam power. Weird science allows someone to combine Tesla’s engineering concepts and Reich’s orgone energy to devise something that functions like a TL12<sup>+</sup> matter transporter, using only vacuum tubes, various crystals, a Tesla coil, and some parts from an orgone accumulator.

## WEIRD SCIENCE, MAGIC, OR PSIONICS?

Psionics is commonly referred as a method of permitting magic-like powers and effects in non-magical settings. Psionic abilities such as telepathy, mind control, and telekinesis certainly have their spell equivalents, sometimes even bearing the same name. Many magic spells (Dream Projection, Dream Sending) are obviously psychic in nature, and can certainly be converted to non-magical mental powers.

If the GM finds psionic characters too powerful and magic too complicated to easily manage, weird science can be used to introduce effects similar to magic and psionics into games where the settings don’t allow for those forces (or where the GM would rather not bother dealing with those rules).

Of course, a weird-science campaign doesn’t have to *exclude* magic or psionics. *GURPS Psi-Tech* could be considered a weird-science supplement, with the descriptions of Kirlian photography and psychotronic generators falling definitely within weird-science (or weird-engineering) territory. Most of the technology described in *Psi-Tech* is aimed at enhancing the abilities of existing psionics. Weird science would take this a step further, utilizing theories of electricity and psychology (perhaps even brain chemistry) to enhance not only the powers of the psionically gifted but also to bestow psionic gifts on the mundane. Such powers are entirely dependent on weird devices, which are subject to their own particular set

of weird effects when they critically fail. (See the *Random Side Effects Table*, p. B479.)

Likewise, in a no-mana setting, weird science could be essential to the functions of alchemy and herb lore. In a high- or very-high-mana setting, “magical energy” might be one of the various forms of radiation studied by scientists and control by engineers. Spellcasters manipulate mana with words and gestures; weird scientists do it with transistors and crystals.

Alchemy seems to straddle a line between magic and weird science. The classic alchemical theories depend upon an assumption that some chemicals and compounds have inherent magical energy (in *GURPS* rules, this would be mana). Other alchemical models call for elements and compounds to have spiritual characteristics or be empowered by emanations from the astral plane. Later alchemists, many of whom were “natural scientists” and products of the Enlightenment, rejected “magical thinking” and spiritual explanations to focus on understanding the physical processes that were occurring within the observed chemical reactions. What were previously considered inherent magical properties became ascribed with elemental or even atomic properties, and their methodical processes and refusal to accept magical thinking for answers led to the development of physical and organic chemistry. However, they still lacked an understanding of the subatomic, and so even as they began to turn away from magic as an explanation and embrace naturalist methods, they developed speculative and often wild explanations. Late alchemy – roughly during the time of Newton (a master alchemist himself, it is widely accepted) – could be treated as weird science instead of magic.

### *Weird Medicine*

Alternative medical theories not based on religious teachings are weird science, but are also covered in theory and practice by the Esoteric Medicine skill. Although most esoteric medicine is founded on religious or magical teaching, contemporary practitioners of energy healing are increasingly appropriating the language of quantum physics to describe a working theory. Many attempting to take a more scientific approach claim to identify and utilize body processes or energies unknown to “Western medicine.”

The same could be true of Herb Lore and herbal-based potions. Contemporary alternative medicine advocates claim certain herbs and plants have physical properties that have been overlooked by contemporary scientists (see *Weird Medicine*, p. 33). More than a little practical method and solution can be found in what is termed “folk medicine”; any number of plants have medicinal properties from which some established cures are derived, so there is some validity to the claims of herbal-healing practitioners. However, their wilder allegations of curatives and medicines that have miraculous properties are rejected by established science and often considered “crackpot,” thus well within the established definition of weird science. If the explanation for the curative powers of a particular plant isn’t magical, it could be considered weird science (“weird botany”).

## HISTORICAL WEIRD SCIENCE

Examples of weird science abound in fiction, but what about *realistic* weird science, or weird theories derived from real-world observations and experience? Despite the official game description of weird science as “crackpot,” such theories are not limited to the fringes of mainstream science. A method of finding historical weird science is to locate a point on the historic timeline when a significant scientific discovery was made (for example, when German scientist Alfred Wegener announced his hypothesis of continental drift in 1912 – the early 20th century was a rich time for weird science). In most cases, you can work backward to find a number of previous attempts to explain a certain observed event. Many of these proposed (and later rejected) theories are fine examples of weird science.

Sometimes a theory that seems at first crackpot later becomes the defining theory of a science – the continental-plate drift theory is a fine example of this. The theory was first proposed, based purely on a study of various maps, by a Flemish cartographer in 1596. Through the following centuries, earth

*Imagination is  
as vital to any advance  
in science as learning  
and precision are  
essential for starting  
points.*

*– Percival Lowell*

scientists scoffed at the notion that the continents are in motion. Existing geological evidence did not seem to support the theory – indeed, anyone with “common sense” would reject the notion that massive land masses are in motion! Wegener began compiling evidence in 1912. By the 1950s, the theory began to be integrated into mainstream geology. A weird theory that once defied scientific reasoning and common sense eventually gained widespread popular acceptance – it is now commonplace for even children to note the continents can be fit together like a jigsaw puzzle.

Weird theories are also sometimes derived from mistaken research. The Martian Canals are a good example of this. Percival Lowell’s observations gained instant media traction and became accepted truth, resulting in published observations about Martian society, descriptions of Martian activities, and eventually stories of psychics who claimed to have visited the red planet. Better optics resulted in the sudden disappearance of the canals and they have long been repudiated by scientists. Even so, to this day, some people expect to see the canals when they visit a planetarium. Indeed, the “Martian face” controversy and other present-day weird-science claims show this to be a belief with continuing resonance. Popular beliefs and (mis)conceptions regarding science are a fine source of weird theories.

Occasionally a weird theory takes hold and, without any competing theories, begins to become accepted scientific theory. Prosper-René Blondlot was a well-known and distinguished French scientist who he claimed to have discovered N-rays in 1903. While experimenting with the polarization of X-rays, Blondlot photographed the spark between two electrodes in an X-ray beam and noticed changes in the brightness. He quickly attributed these changes to a new type of radiation, which he termed N-rays (named for the University of Nancy where he was performing the experiments).

## Game the Controversy

Biology has its own history of weird theories regarding the origin of life, an area of inquiry long dominated by religion. The few scientists who dared attempt to describe the mechanisms of creation and the complexity of nature devised an interesting array of theories, some of which (like how the giraffe got its long neck) are still commonly accepted by nonscientists. It wasn’t until the observations of a wandering naturalist named Charles Darwin that the sciences of biology and medicine formalized a theory of life that sought to explain everything from the common traits creatures inherit to the diversity of the species.

The theories of creationism or “intelligent design” constitute a rich and historic body of potential weird science that has some application in fantasy gaming. An alternate Earth where the theories of evolution don’t hold true might utilize some of the strange creatures that creationists have envisioned in their attempts to explain dinosaur fossils. Likewise, an alternate “young Earth” – a fully developed mirror that actually is only 6,500 years old – could pose an interesting puzzle for I-Corps scientists.

Over 100 fellow scientists claimed to have replicated Blondlot's results; every living creature was said to emit the radiation, and many said that they had photographed the "aura" of plants, animals, and humans. The existence of N-rays was gaining acceptance until Lord Kelvin and several other prominent physicists announced they were unable to produce the described results. Further investigation revealed numerous flaws in the methodology of those scientists who thought they had observed N-rays, most of them falling victim to experimenter bias.

One of the most famous weird scientists was a young member of Sigmund Freud's inner circle named Wilhelm Reich, who in the 1930s proposed the existence of orgone energy. Reich claimed this energy was the ordering principle of the universe, a force that worked to counter the effects of entropy. Reich believed that orgone energy existed within each and every living being, flowing through them and connecting them in a universal matrix of life (not unlike the Force in *Star Wars*). Reich went on to develop "orgone accumulators," chambers that enhanced the orgone energy of the individual and helped them heal physical and even mental illnesses. Reich also claimed orgone energy could be used to manipulate the weather, and is said to have successfully demonstrated one of his "cloud-busters" to a number of onlookers. Reich was ultimately prosecuted and imprisoned by the federal government for his devices; his papers and devices were impounded or destroyed.

Nikola Tesla similarly had his unpublished papers and theories posthumously seized and classified secret by federal authorities. Among the devices envisioned by Tesla was a "death ray," a disintegrator beam that would operate over vast distances. Many point to the government seizure of his papers as proof that Tesla's design was successful. It certainly takes little stretch of the imagination to see a direct line from Tesla's death ray to contemporary plans for space-based lasers and tank-mounted heat-rays. A portable death ray has obvious applications in gameplay and a resourceful weird gadgeteer-armorers might construct a hand-held model. The weaponization of electricity is an obvious application, but Tesla also believed in the therapeutic powers of electrical power. He had

a number of ideas and even designs for machines that would use electricity and heat to heal common illnesses. He also theorized that the brain produced electrical energy and likely functioned somewhat like a calculating machine. "Teslapunk" weird engineering and scientific theory could be behind any number of the items described in *GURPS Psi-Tech*, *Bio-Tech*, and, of course, *Ultra-Tech*.

Ultimately, weird science is certainly as colorful and flexible as magic and psionics, and provides as satisfying a gaming experience for gearheads, geeks, and those who are technically inclined. With imagination and ingenuity, a resourceful GM can design a well-developed world of weird science and engineering that will provide unlimited opportunities for adventure and glory.

## Weird-Science Supers

The powers of four-color heroes are often the result of weird science. Real-world radiation would kill the spider that gave Peter Parker his powers, and if the arachnid did survive to bite you, you'd likely only *think* you were climbing the walls as your internal organs slowly succumbed to the radioactive toxins in your bloodstream. Barry Allen's laboratory mishap would have resulted in a Flash-like dash for the chemical shower, but it's unlikely such an accidental bath would result in anything other than severe burns (or even death). A certain familial foursome would have all died horrible deaths about six months after an unprotected dance in a cosmic storm. Bruce Banner would have been blasted into bloody vapor instead of transformed into a green giant.

Moments like these are weird science at its finest. Although the writers typically didn't bother with a theoretical explanation, the changes nonetheless resulted from chemical or biological processes rather than magic or psionics. Sometimes the chemicals result in psionics, but that's still weird science.

## ABOUT THE AUTHOR

Cal Godot has been a student of weirdness for most of his life. He has investigated claims of psychic powers, swamp monsters, time travelers, vampires, and ghosts in his lifetime, but has yet to discover anything weirder than everyday life in Los Angeles.

*It is true that some of them have had to do with wireless telegraphy and that in addition to the tower and poles there is a hole dug in the ground. This is 150 feet deep and is used in these experiments. The people about there, had they been awake instead of asleep, at other times would have seen even stranger things. Some day, but not at this time, I shall make an announcement of something that I never once dreamed of.*

*– Nikola Tesla*