

Science and Fiction

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Pseudoscience and Science Fiction

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Introduction

Any large bookstore today will have a shelf labelled “Science Fiction”. The term hardly needs explaining. It encompasses any work of fiction that stretches the reader’s imagination beyond the current limits of science: extrasensory perception, time-slips, space aliens, faster-than-light travel and other dimensions. Yet elsewhere in the same store, there is likely to be another shelf with a selection of *non-fiction* books on exactly the same subjects. How this shelf is labelled—“Paranormal” or “Alternative Beliefs” or “Unexplained Phenomena”—will vary from store to store. It will rarely be labelled “Pseudoscience” . . . but that is exactly what it is.

The prefix “pseudo-” comes from a Greek word meaning false. “Science” itself comes from the Latin for knowledge, but the defining feature of modern science is the *method* by which this knowledge is arrived at. Pseudoscience is “false science”, not because its assertions are false (although they often are), but because they are arrived at by a non-scientific method.

Real science can be thought of as a four-step process:

1. Pose a question
2. Formulate a hypothesis to answer that question
3. Analyse the hypothesis to determine its testable consequences
4. Carry out the tests, and accept/modify/reject the hypothesis accordingly

Pseudoscience is only really concerned with the first two of these steps. It is all about making hypotheses, not putting them to the test. In fact, pseudoscientific hypotheses are often constructed so as to be *untestable*—and hence incapable of disproof.

Science and pseudoscience may address the same questions, but they approach them in completely different ways. For a scientist, the aim is to get as close to the truth as possible—even if that truth is not an appealing or easily understandable one. For this reason, science can often come across as overly complex, boring and irrelevant to the non-scientist. Pseudoscience, on the other hand, is largely geared towards telling people what they want to hear.

As a specific example, consider the question of life on other planets. Most people would agree this is an exciting question, and there is a branch of science called astrobiology that deals with it. Unfortunately, it is not a question that can be answered by direct observation, even with the most powerful telescopes. The best astrobiologists can do is to determine the most extreme conditions under which life (usually in microscopic form) can survive on Earth and then search for similar environments on other planets. This may strike the non-specialist as a disappointingly dull answer to what started out as an exciting question.

A pseudoscientific approach to the same question might be as follows. Start from the “exciting” premise that extraterrestrials are intelligent humanoids, similar to ourselves but technologically more advanced by several centuries. They visit Earth frequently, but their technology allows them to remain virtually undetectable and to tamper with the perceptions and memories of any inadvertent witnesses. The aliens may even be conspiring with Earth governments to conceal their existence from the public. Not only is this hypothesis more appealing than anything real science has to offer, but it is literally impossible to disprove. In terms of audience appeal, pseudoscience beats mainstream science hands down.

The term pseudoscience is a pejorative, and many of the people who use it—usually professional scientists—denigrate it as “bad science”. This misses the point that there is no significant overlap between the “consumers” of pseudoscience and those of real science. The latter is an essentially practical discipline: its main role is as an enabler of technological advancement. In contrast, pseudoscience is a creative undertaking—effectively a branch of the entertainment industry. Its end users *read books* . . . and for a book to be successful, it needs to say something large swathes of the public want to read. Pseudoscience is much better than real science at giving the audience what it wants.

People *want to believe* there is intelligent, anthropomorphic life elsewhere in the universe. They *want to believe* in strange powers and mysterious events. They *want to believe* there is a meaningful pattern behind today’s headlines—even if that pattern is a sinister government conspiracy.

The phrase “I want to believe” was popularized in the 1990s by the TV series *The X-Files*. While much traditional science fiction is set on other planets, or in the far future, *The X-Files* was rooted firmly in its own present. Yet it managed to deal with all the major SF tropes—time travel, aliens, ESP and antigravity—and it dealt with them in the here and now. That is essentially what pseudoscience does—except that it is presented as “fact” rather than fiction.

Besides its overlapping subject matter, pseudoscience resembles science fiction in other ways. Both are products of the imagination, and both are aimed at a broad, general readership. The most obvious difference is one of purpose. Most science fiction writers only want to tell a good story, not to make a didactic point. If they do set out to make a point, they are more likely to satirize some aspect of present-day politics than—to give a common example from the world of pseudoscience—highlight a flaw in Einstein’s theory of relativity.

Fiction writers may draw on popular pseudoscientific theories to add verisimilitude to their stories. The best-selling novelist Dan Brown is a master of this technique. More surprisingly, the process sometimes works the other way around, with pseudoscience taking its cue from science fiction. The symbiotic relationship between ufology and Hollywood is a prime example of this.

A number of SF authors also produced non-fiction works about pseudoscience. Some of them, like John Sladek and John Brunner, took a deeply sceptical view, while people like Arthur C. Clarke and Lionel Fanthorpe approached the subject in a more open-minded way. At the other extreme, writers like John W. Campbell and Whitley Strieber, who started their careers in fiction, went on to become outspoken advocates of pseudoscientific topics.

For the most part, this book takes a non-judgmental attitude to the pseudoscientific topics it deals with. Whether they are right or wrong is irrelevant to the book’s main purpose, which is to highlight some of the more interesting examples of cross-fertilization between pseudoscience and science fiction.

The first person to make a systematic study of anomalous phenomena was Charles Fort. His writings coincided with the emergence of science fiction as a distinct genre in the 1920s and 30s, and Fort’s influence on early SF writers was huge. This is the subject of the first chapter, “Charles Fort and the Fortean”. The next chapter, “Anomalous Phenomena”, discusses a number of Fortean phenomena that have crossed the boundaries between fact and fiction, including the Philadelphia Experiment and the Bermuda Triangle.

The “High-Tech Paranoia” chapter examines the blurring of fact and fiction in the bizarrely paranoid worlds of writers like Richard Shaver and Philip K. Dick. It is followed by a chapter on UFOs—and the intriguing two-way interaction between fact and fiction that has continued from the first “flying saucer” sightings of the 1940s to the present day.

Between them, the next two chapters span some of the most ubiquitous topics of both pseudoscience and science fiction: ESP and other powers of the mind in “Mind Power”, followed by a range of physics-defying hardware—

space drives, antigravity and perpetual motion machines—in “Space Drives and Anti-gravity”.

A speculative idea that has cropped up time and again over the last hundred years, both in fiction and non-fiction, is that of ancient technology—whether of human or extraterrestrial origin. This is examined in “Technology of the Ancients”. To round the book off, the final chapter on “Conspiracy Theories” ventures into the ever-popular realm of conspiracy theories—including the strange notion of “predictive programming”, whereby science fiction itself is used as a medium for the indoctrination of an unsuspecting public.