

On Science Fiction

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If you read the New York Times Book Review, you know that there's an interview with an author every week. Often there's a question like "Which Genres do you especially enjoy reading. And which do you avoid?". Far too often the answer is that they never read Science Fiction.

Science Fiction has a reputation as a genre for adolescents and others who have never grown up. It's Space Opera. It's about gadgets. It's not real literature. Critics complain that Science Fiction literature is of low quality; that 90% of Science Fiction is crap. In 1951 Science Fiction author and critic Ted Sturgeon countered this by noting that 90% of all literature is crap. This is now known as Sturgeon's Law. The philosopher Daniel Dennett later generalized this to "90% of everything is crap".

So let us define Science Fiction. Some of the snobbishness of the New York Times authors may arise from a misunderstanding of what Science Fiction actually is.

The term "science fiction" is a misnomer in that it is rarely fiction about science. Science is annoyingly predictable, and rarely provides for the conflicts followed by resolution that make for engaging literature. Good literature generally involves human beings, or sentient aliens, with the capriciousness to be unpredictable.

The genre is more appropriately titled "speculative fiction", since authors are free to speculate about what-might-have-been, what-if, and what-might-be. When these speculations are carried out subject to the constraints of physical law, we have the genre called *Hard Science Fiction*. Speculative Fiction can encompass the genre called alternative histories, but I prefer to look ahead.

Hard science fiction does not need or use magic. It is not fantasy. But it is useful to keep in mind Arthur C. Clark's admonition that "any sufficiently advanced technology is indistinguishable from magic".

So if you want to use dragons, it is your responsibility to explain how they can fly and breathe fire. This actually has been done.

Harry Potter, and the "Game of Thrones", are fiction. They are fantasy. They are not science fiction.

Remember that the purpose of serious literature is not merely to entertain - it is to examine the human condition. That is what often distinguishes the good Science Fiction from the merely mediocre.

Even within these limitations, gadgets often abound. But this goes with the territory. Science Fiction is the literature of dreams, hopes, and aspirations. Science Fiction is a literature of ideas, more so than characters. Science Fiction plays out on scales as expansive as the universe, or as small as a space capsule.

Sometimes Science Fiction examines human beings and their reaction today to novel situations; often it portrays humans facing an indifferent universe;

- it may take place on today's Earth,
- or an Earth that may yet exist,
- or on one of the thousands of exoplanets now known,
- or on a planet or universe completely residing in the imagination of the author;
- sometimes it imagines a distant future and considers how human beings survive under those conditions;
- sometimes it imagines our evolution as a species.

But always, it is literature about human beings in worlds, or experiencing conditions, different from today. Science Fiction is dangerous, because ideas can be subversive.

Science Fiction expands your mind, because sometimes reality is just too confining.

Some History

Human beings have always told stories, and not all of these stories are fully grounded in reality. We have an urge to understand, or at least rationalize, what we see around us. This presumably led to the invention of gods, and of creation myths.

We are prone to philosophizing, and to critiquing those human institutions around us, including politics, leaders, and, yes, even the gods themselves. Authority does not always respond well to criticism; setting thinly-disguised polemics in distant lands is often safer than direct criticism.

One of the earliest stories we can identify as falling squarely in the Science (or Speculative) Fiction genre is Cyrano de Bergerac's "L'Autre Monde ou les états et empires de la lune," written circa 1650. This work, which pre-dates the invention of the novel, is a not-too-gentle satire of the French royalty, and of religion and the clerical hierarchy. The science? Cyrano events the equivalent of a ramjet to get to the Moon. There is no *Deus ex Machina*. And he speculates about a different type of society.

Cyrano kept his head because the work is set on the Moon. The work was not published during his lifetime, or even shortly thereafter - it was not published until 1910. Ideas can be dangerous, and subversive.

Jules Verne published "From the Earth to the Moon" in 1865. It is a gadget-laden engineering novel with little character development, and lots of snide comments and pointed observations about the American character from a French perspective. Verne got most of the science and engineering right - except that his method of launching the capsule would have killed all the occupants.

In 1884 Edwin A Abbott, writing as A. Square, published "Flatland: a romance of many dimensions", a scathing social commentary on Victorian society masquerading as

a story about life in a two-dimensional universe. It is still read as a teaching tool for understanding higher dimensions, even if the social commentary eludes us.

HG Wells published “The Time Machine” in 1895. Yes, it is a story about time travel into the future as envisioned by the evolutionary theories, both Darwinian and astrophysical, of the day, but it is also a polemic on Victorian/Edwardian society and communism, with the Morlocks and the Eloi representing the lower and upper classes of British society.

Escapist literature? Perhaps - but with serious undertones.

A Changing Landscape

Science Fiction literature reflects the concerns and aspirations of its day.

In the so-called Golden Age of Science Fiction (the 1930s), the tenor was generally optimistic. Atomic Energy would provide limitless power; rockets were being perfected. Robots were being envisioned. And in the midst of the Great Depression we needed to dream optimistically.

In the 1950s writers became concerned with nuclear war and the destruction of the species, but there still a generally positive view of the future.

By the 1980s the utopian view had become very much dystopian, with authors focussing on war, overpopulation, pollution and environmental problems, the loss of privacy, and other problems.

Today there is a mix. There are more works focussed on social issues, or environmental issues. Space operas tend to be more gritty (realistic?) than a half-century ago. Utopian futures are hard to find, but the dystopias seem less foreboding than they did in the 1980s. But as always, the concerns reflect our concerns today: authors are human, and write about what they know.

And amidst all of this there are aliens invading Earth, beginning with HG Wells’ “The War of the Worlds”, and, of course, humans invading the universe.

Gadgets and the Scope of Science Fiction

Even within the confines of Hard Science Fiction, authors can take liberties without violating the spirit of the admonition to obey the laws of physics.

- If you want to get anywhere, faster than light speed is critical. The universe is very big, and matter cannot travel faster than the speed of light. Fine, posit that a faster than light (FTL) drive has been invented. Then you’ll have to deal with causality paradoxes. Putting people in arks and traveling between the stars at sub-light speeds works, but not for space operas. Space is big, and space travel is slow.
- You can, nay, must, invent technologies that do not exist today. To not do so indicates a serious lack of imagination. But beware: Science Fiction authors are generally lousy prognosticators, pessimistic on the technology and optimistic on the sociology. In the 1950s, computers were the size of planets. But Chester Gould (in *Dick Tracy*) did imagine something like the Apple Watch.

- You may want to invent intelligent aliens. This is hard to do, because aliens are, well, alien. There are some pretty weird critters living on Earth; true aliens evolving in a completely different environment, under a different sun, may be unrecognizable. They will most likely not be anthropomorphic bipeds, or giant cockroaches. Let your imagination run wild. You'll probably fail.
- There is some very good Science Fiction that uses time travel as a gimmick. We know how to travel into the future (you are doing it at a rate of one second per second), but time travel into the past is verboten. Time travel into the past violates the law of conservation of energy, and gives rise some very serious, though interesting, causal paradoxes. I do draw the line at this one: good Science Fiction does not need time travel. Read Niven's essay "The Theory and Practice of Time Travel"

The primary role of good Science Fiction is not only to entertain, or to be escapist. Good Science Fiction envisions plausible futures and human reactions to those futures. Good Speculative Fiction stories are cautionary tales.

- They can be used to teach science (e.g, the short stories "Neutron Star" or "The Cold Equations"),
- or to consider how humans might react to novel situations.

How might we as a species react to

- the discovery of intelligent aliens (e.g., "Contact"; "The Sparrow")?
- or to their visiting Earth (e.g., "Childhood's End"; "Remembrances of Earth's Past")?
- or to cloning ("The Kiln People")?
- or to genetic engineering of superior beings ("Beggars in Spain"; "Gattaca")?
- or to the destruction of the biosphere and our environment ("Dune"; "Green Earth")?
- or to widespread use of robots ("Do Androids Dream of Electric Sheep?", "I, Robot")?
- or to other economic systems ("1984"; "The Unincorporated Man")?

These are not all idle speculations - or adolescent fantasies - some of these situations are likely to become reality. So the many worlds of Science Fiction are a series of alternate possible futures. Some are more plausible than others, but we ignore the possibilities at our peril.

There are certainly learned studies that broach all of these topics, but Speculative Fiction stories do so in much more engaging ways. If you have not read any Science Fiction lately, I challenge you to do so, not just because reality is just too confining, but because novel ideas can be stimulating, and dangerous.

Science fiction (sometimes shortened to sci-fi or SF) is a genre of speculative fiction that typically deals with imaginative and futuristic concepts such as advanced science and technology, space exploration, time travel, parallel universes, and extraterrestrial life. It has been called the "literature of ideas", and often explores the potential consequences of scientific, social, and technological innovations.

Genre: Science Fiction: Most Popular Sci-Fi Titles. Genre: Science Fiction: Most Popular Sci-Fi Feature Films. Science Fiction Movies in the IMDb "Top 250": Most Popular IMDb "Top 250", Sci-Fi Feature Films Released 2000 to 2021.Â On the night of the discovery of a duplicate Earth in the Solar system, an ambitious young student and an accomplished composer cross paths in a tragic accident.

Director: Mike Cahill | Stars: Brit Marling, William Mapother, Matthew-Lee Erlbach, DJ Flava. Votes: 90 766 | Gross: \$1.32M. 5. MY SCIENCE FICTION LESSON: Make your own English lesson on science fiction. Make sure there is a good mix of things to do. Find some good online activities. Teach the class / another group when you have finished. 6. ONLINE SHARING: Use your blog, wiki, Facebook page, MySpace page, Twitter stream, Del-icio-us / StumbleUpon account, or any other social media tool to get opinions on science fiction. Share your findings with the class. ANSWERS. Science fiction, a form of fiction that deals principally with the impact of actual or imagined science upon society or individuals. The term "science fiction"™ was popularized, if not invented, in the 1920s by one of the genre's principal advocates, the American publisher Hugo Gernsback. You'll never read funnier science fiction; Adams is a master of intelligent satire, barbed wit, and comedic dialogue. The Hitchhiker's Guide is rich in comedic detail and thought-provoking situations and stands up to multiple reads.Â He is a haunting, solitary figure at first, on a mysterious quest through a desolate world that eerily mirrors our own. Pursuing the man in black, an evil being who can bring the dead back to life, Roland is a good man who seems to leave nothing but death in his wake.