Alternate Realities, Alternate Worlds

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Abstract

Most science fiction novels are based on distinct themes that incorporate facts that belong to the real world and combine them tastefully with ideas, fantasies and visions of the author. This report explores the variety and richness of science fiction stories by identifying themes in many science fiction novels as well as movies and television series, and considering how fact and fiction work together to create a unique genre.

The boundary between science fiction and fantasy is rather hazy, identified only by the scientific culture of the time. Rather than confining itself to a narrow and well-defined view of science fiction, this report attempts to identify and analyze the technology-oriented facets of what may or may not otherwise be categorized as science or technology fiction.

The Beginning

Mary Shelley's *Frankenstein, or the Modern Prometheus*[1] is often considered the cornerstone of modern science-fiction, and it is therefore apt that I begin with a discussion of this novel.

Frankenstein is a scientist who creates a living being by assimilating body-parts of dead human beings, putting them together to develop a frame for a living creature, and finally using his scientific knowledge to provide the spark of life to wake up the creature. At this juncture, he feels appalled by his 'mistake' however, and abandons the monster that he has made. The creature comes back to haunt his life, leading to great misery for both the creator and the created.

This book was published in the year 1818, an era when the scientific method was not yet a way of life. Many factors are believed to have influenced Shelley in her work, such as the French Revolution of 1789, the works of Percy Shelley and others, and so on.

When examined carefully, the story of *Frankenstein* reveals two distinct realities – the world of Frankenstein the scientist, and the world of Mother Nature.

The interaction between these two worlds is rather limited. Frankenstein the scientist makes use of his God-given tools to do the work of God Himself, and he therefore pays a heavy price for his impudence. In a metaphorical sense, Viktor Frankenstein is standing on one side of the fence and wishing he could be on the other side, which is greener, fairer and filled with joy and happiness that he can only dream of experiencing.

It is from this point of view that the story is narrated, and it is this that is projected as the readers' reality. All characters, events and figures other the Frankenstein and his creation – the ones who are 'on the other side of the fence' – have a degree of surreality associated with them, as if they were living in a different and more carefree world.

Temporal Visions

Every story, without exception, has with it an associated space and time – a canvas - where events take place. A reader is invariably transported to the time and place related by the story, and it is there that events unfold. *Frankenstein* is a story that confines itself to a limited period, that is, the lifetime of Viktor Frankenstein. In that sense, it a narration of 'local' events, that have little bearing (apart from a few deaths, of course) on the rest of the big world around it. The sheer of horror of having created a monster is revealed to none but a few, and it is the mind of Viktor Frankenstein that is the real 'canvas' on which the story is projected.

A long time ago, in a galaxy far, far away....

In contrast, George Lucas' *Star Wars*[2] tells the story of the mystical Force that forms the essence and soul of the Universe. Individual characters are mere blips in this story, even Jedi masters like Yoda and Obi-Wan Kenobi are dispensable, as they become 'one with the Force'. The Star Wars universe spans an entire galaxy, and stretches over many ages.

The technology that is employed is meant to be somewhat realistic, in the sense that it lacks the sleekness of instruments, space-ships and design that is conventionally attributed to highly advanced technology. Like all space-travel movies, it incorporates the notion of transportation at the speed of light, which, according to current science, is theoretically impossible. An innovative piece of equipment introduced is the *light-saber*, a weapon in which a crystal is used to focus light energy, thereby creating a laser sword.[3]

Although the *Star Wars* saga is set in the ancient past, it uses a simple trick to introduce novel technological artifacts: all events take place in a different galaxy altogether. This is a style that is quite distinct from many other science fiction stories, which, in general, explore one of the following questions -

(a) What can we say about our world if it had been different from what it is now?

(b) What if our world *is* different from what we think it is now?

(c) What will our future look like? Or rather, what *can* our future look like?

(d) How will humans interact with non-human entities (robots, aliens etc.), when the time for such interaction arrives?

In fact, the only commonalities between the *Star Wars* universe and our own are the social structures that form a basis for interaction between people, and the physical laws – leaving apart the powers of the Force - that resemble the ones that we are accustomed to.

A science fiction writer could go ahead and create a *completely* fictional universe, but unfortunately, it is only to a limited extent that the human mind can absorb conceptual novelties.

The Future Of The Human Race

...to boldly go where no man has gone before....

Gene Roddenberry's *Star Trek*[4] debuted in the year 1966. This is the story of a Utopian future in which most of the problems back home on Earth have been solved, and space is the final frontier for exploration. Captain James T. Kirk of the starship *Enterprise*, along with his loyal and able crew, are on a five year mission to explore new worlds and to seek out new life and new civilizations.

It is interesting to note that this mission spanned only five years. Set in the twenty-third century, technology had advanced to a level where traveling at several times the speed of light was possible, and so many adventures and exploratory journeys could be compressed into a time-span of half-a-decade.

Of all the characters in this series, Mr. Spock, the purely rational Vulcan, is the most intriguing. Can a computer that works on the basis of pure logic solve all our problems? The generally accepted notion is that a computer can (eventually) solve all *logical* problems, but not all *human* problems. If this is our understanding, can we not evolve into a society devoid of emotions (which are acknowledged to be irrational), so as to be in a position to solve all of our problems by means of our technology? This may seem blasphemous to some, but it is the kind of idea that allows us to make a distinction between a Utopian future and a dystopia, as characterized by a novel like Aldous Huxley's *Brave New World*[5]*.*

A New World

The future is a place. Some of it may seem familiar; some of it may seem like uncharted territory. Certain objects, people and ideas in this place may be less than believable, but nevertheless, this is a coarse mixture of our dreams, hopes and desires, as well as our unspoken nightmares.

The 'brave' new future portrayed in Aldous Huxley's novel is essentially a place where, from a human perspective, things have gone terribly wrong. People have lost their individuality, becoming mere tools for a larger purpose. In this context, happiness, joy, sorrow, love and other emotions take on a more shallow meaning. The individual is conditioned to take *soma* in order to experience instant pleasure. Promiscuous sex is the norm; death is no more than an intriguing and interesting

experience. This 'controlled emotional response' can be contrasted with the complete lack of emotional response that is characterized by Mr. Spock and others of his planet.

The mass appeal of Mr. Spock is partly due to the fact that there just *might* be a shred of emotion hidden behind many layers of logic. “What if?” is a very powerful and motivating question that is skillfully employed by the *Star Trek* creators.

Brave New World and *Star Trek* are related by the fact that they are both plausible futures. A reader or viewer can envision that some years from now, the existing trends in society may result in a world quite similar to those portrayed by these stories. In this sense, they sometimes seem to be more fact that fiction.

A Foundation For A New Science

One of the most fascinating science-fiction novels ever produced is Isaac Asimov's *Foundation* series. This is essentially a series of seven books, although the storyline is a continuation and extension of what has been described in the *Robot* series of books by the same author.

In brief, the story proceeds as follows -

Not too far into the future, the human race has started colonizing nearby planets[6]. There is friction between Earth-dwellers and the colonizers, because they both believe in their own superiority. Those who have migrated to other planets have developed far superior technology, including *robots* that are capable of serving human beings efficiently. These robots are bound by the Laws of Robotics which state that,

1. A robot may not injure a human being or through inaction allow a human being to come to harm.

2. A robot must obey instructions given to it by humans, subject to the first law.

3. A robot must protect its own existence, subject to the first two laws.

Eventually, there is conflict between Earth and its enemies, in which Earth is victorious, thanks to one particular robot, who is unique because he has the ability to read thoughts and emotions, and also influence them to some extent. In fact, this robot realizes that the Laws of Robotics themselves are incomplete, and formulates a new law that precludes and overrides the other three laws,

0. A robot may not injure humanity, or through inaction allow humanity to come to harm.

This was merely the prologue. Many tens of thousands of years later, most worlds are under the control of the Galactic Empire, and the idea of robots has been forgotten by human-kind, but this robot – who goes by the name of R. Daneel – is quietly working for the benefit of humanity under the guidance of the Laws.

At this juncture, a mathematician named Hari Seldon arrives on the scene[7], having developed a predictive science called psychohistory, which claims that it is possible, at least in theory, to predict the actions of large mobs of people. Daneel, in disguise, persuades and helps Seldon perfect this science. Eventually, two Foundations are set up[8]: the first[9] is a consortium of physical scientists who serve to form an administrative core after the disintegration[10] of the Galactic Empire (as predicted by Seldon), while the Second Foundation[11] is a secret society of mental scientists and psychologists whose function is to ensure the working of Seldon's roadmap to an optimal future.

The final twist to this plot is that there is a planet called *Gaia*[12] in which the inhabitants have evolved to develop a 'group consciousness', that enables the entire planet to function as a single giant organism[13]. A young man named Golan Trevize is the 'chosen one'. He is entrusted the task of selecting the best possible future for the human race, because Gaia, being bound by laws similar to the Laws of Robotics, cannot afford to make a mistake by choosing a future that leads to disaster.

Trevize decides that the Galaxy as a single organism is a better future for humanity, as compared to the kind of future offered by the two Foundations.

Trevize then proceeds to look for the original planet Earth that has, over the years, disappeared from the collective human consciousness. In his quest for the Earth, Trevize finally meets Daneel, who reveals to him[14] that he was the force behind the events that had taken place over the past several thousand years, including the establishment of the Galactic Empire, the growth of the Foundations and the evolution of Gaia.

Although Asimov has much to say about new technological innovations that have been developed and perfected over thousands of years, his real contributions to *scientific* thought, as opposed to *technological* innovation are mainly two things: the first is an exploration of the idea that in the absence of appropriate controls, an automaton may eventually turn against its creator; the second idea is the concept of *psychohistory* which claims that the actions of large mobs are predictable. This is in dialectical opposition to the view that the actions of any single individual can have a very significant "ripple" effect that alters the course of history.

Droids, Androids, Robots, Replicants

The world of science fiction has a rich and varied heritage of machines that think. The term *robot*, used to denote any mechanical device used to perform routine and monotonous tasks, was coined by the Czech writer Karel Čapek[15]. The same term, however, is often used synonymously with the word *android* which refers to an "intelligent" machine that possesses the form of a human being.

Although Daneel is bound by the Laws, he often demonstrates that he is extremely skilled at manipulating them to his purposes*. Still, he is a benevolent robot, and his efforts are entirely towards the welfare of humanity.

Is this something we should worry about? Suppose that such a future has indeed materialized, where artificial intelligence that mimics human intelligence has been developed and perfected – is it likely that the machines could 'take over'?

* This can be easily seen in the *Foundation* series. Quite often, Daneel conceals the truth in order to achieve his ends. In Asimov's world, robots are expected to speak the truth when asked a direct question, but Daneel, with his mental abilities, can prevent the adversary from asking the wrong questions.

Asimov does not give a straight answer to this question; he merely provides supportive logical arguments for both sides. The real question here is, "How *human* can machines become?"

Different novels and stories have different opinions on this question. Going back to the world of *Star Wars*, two important characters are the droids, C-3P0[16] and R2-D2[17] that come into the picture at critical times. Interestingly, while these droids seem to behave in a very human fashion, there is no conflict whatsoever regarding their purpose, duties or loyalties, nor are they ever inclined to turn against their masters for personal benefit.

In Philip K. Dick's short story[18] that later became *Blade Runner*[19], the androids are well-nigh indistinguishable from humans. Their lack of empathy is the only thing that supposedly differentiates them from humans, but even this distinction is eventually cast into doubt.

A Choice Of Realities

We must revisit an unanswered question – what can our future look like? Today, we have developed sophisticated machines, and are in the process of developing artificial intelligence. The development of AI is in a nascent stage, which implies that although we have certain presuppositions regarding AI, we have no realistic idea of how an AI-entity might behave. This is the primary reason for the varied notions of androids and robots that have evolved in science-fiction.

Another such area of research that has spawned much science-fiction is the question of whether life exists elsewhere in the Universe. There is an equation called the *Drake equation*[20] that estimates the probability of intelligent civilizations on planets other than the Earth. Given estimates of various influencing factors, this equation can be used to say something like, "The probability of finding an alien civilization is 22%".

Practically speaking, this does not provide any kind of useful information. Nevertheless, this is the farthest we have gone, as far as finding intelligent alien life is concerned. While much effort has been put into the search for extra-

terrestrial intelligence – projects such as SETI@Home[21] are ample evidence – we are nowhere close to knowing the truth. In fact, how life is to be *defined* is still a debatable question.

Again, the result is that there is a lot of speculative science-fiction about alien beings and civilizations on other planets. The movie *Alien*[22], for instance, described a species of aliens which turned out to be equally, if not more, intelligent than humans.

There are actually two facets to this concept of alien life. First, does alien life exist, and what could it look like? Second, how would we, as intelligent beings, interact with beings from other planets? Science-fiction authors have contemplated on both questions, but at this juncture, we can only speculate.

What If?

> *"These creatures you call mice, you see, they are not quite as they appear. They are merely the protrusion into our dimension of vast hyperintelligent pan-dimensional beings. The whole business with the cheese and the squeaking is just a front."*

We live under the constant threat of the world suddenly being turned upside down. A passing asteroid could destroy our planet within the next ten years. Global warming could melt the polar icecaps resulting in universal flooding and destruction of life. A magnetic pole reversal[23] could put an end to our civilization as we know it. If we are to believe H. G. Wells[24], the Martians could, at this very moment, be preparing to assault our planet.

These are the kind of alternate worlds that are explored in many forms of science-fiction – the idea that while we *believe* in a certain kind of reality, we may be living in an illusion.

Douglas Adams' *The Hitchhikers Guide To The Universe*[25] is a classic and humorous example of this phenomenon. The typical (and not very bright) human,

Arthur Dent, wakes up one day to find out that Earth is going to be demolished to make way for a hyperspatial express route. Subsequently, he travels to other planets and systems. It is revealed that humans are (or rather, were) the *third* most intelligent life-form on Earth, next to mice and dolphins. In fact, the Earth was a giant computer that was paid for and commissioned by the mice in order to find the Question to the Ultimate Answer.

The crux of the issue is that while we live in world that we call "real", we may not need to wait for an indefinite future for things to change. The next revelation very well be around the corner.

Odds And Ends

> *"The Hitchhiker's Guide to the Galaxy has a few things to say on the subject of towels. A towel, it says, is about the most massively useful thing an interstellar hitchhiker can have. Partly it has great practical value...More importantly, a towel has immense psychological value..."*

Science-fiction is a unique category of fiction in that it opens up a host of possibilities. In a sense, it talks about the subset of worlds that are actually imaginable as well as feasible, although perhaps not necessarily probable. While certain concepts give these stories a touch of fantasy, this not detract from the plausibility of the scenario that is presented to the reader. Even in *Star Wars* for instance, the working of the mystical Force is explained in terms of *midichlorians* that reside in the blood of the Jedi.

At the other end of the spectrum, there are some who question of very idea of why we should accept anything as our objective reality. Borges[26] envisions a universe which is, in fact, an endless library. It is a scientifically sound question to ask whether this may be possible. We have accepted many theories and ideas that would have seemed incredible to our ancestors; we should not fall into the trap of

rejecting a world that we can conceive and elaborate on, yet cannot accept because of our current beliefs and ideas.

Are we destined to live in this routine and monotonous world? Can we escape to a different, far more interesting world, that allows us to fulfill our dreams and fantasies? Pick up your towel and get ready to flag down a passing flying saucer – we might just get lucky.

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