GRiffin, a scientist, believed that if a person’s refractive index was changed to exactly that of air and his body did not absorb or reflect light, then he would be invisible. Griffin successfully carried out this procedure on himself and became invisible. Unfortunately, he could not make himself visible again, and became mentally unstable as a result. Well, Griffin is not a real-life character, as you would have guessed by now. He is the hero of a famous science fiction novel published in 1897—The Invisible Man by H.G. Wells.

Imagination is more important than knowledge, said Albert Einstein. Most of us are perhaps not aware of the many worlds totally different from our own that exist in the sub-conscious minds of many imaginative people with prophetic vision whom we recognize as science fiction writers.

Often science fiction writers have been known to possess the predictive talent to foresee the future. Jules Verne (8 February 1828–24 March 1905), the celebrated French novelist, had such a prophetic vision and predicted well in advance man’s landing on the moon. Science fiction writers often describe worlds that are quite different from our own though retaining some elements of the one in which we live. But there remains a strong
Whether it is predicting the human landing on the Moon or diving into the deep recesses of the oceans, or for that matter even robots and clones, science fiction writers have always had the ability to peer into the future and hazard guesses, often with astounding precision.

possibility that the imagined world of the story might some day come into existence or be discovered.

The pace at which technology is altering our way of life is very much possible that we are going to have a world quite different from the one inhabited by us. The wonder worlds of science fiction differ from our everyday world in a way that importantly involves science and/or technology in their set up.

Isaac Asimov (2 January 1920–6 April 1992), science fiction writer of world renown, characterizes the genre in these words: “Science fiction story must be set against a society significantly different from our own... usually, but not necessarily, because of some change in the level of science and technology... or it is not a science fiction story.” He has also this crisp and concise definition of science fiction: “Science fiction is that branch of literature that deals with human responses to changes in the level of science and technology.”

According to Robert A. Heinlein (7 July 1907–8 May 1988), another celebrated science fiction writer of his time, science fiction is “realistic speculation about possible future events, based solidly on adequate knowledge of the real world, past and present, and on a thorough understanding of the nature and significance of the scientific method.” Any story that defies the methodology of science is not a science fiction story.

Methodology of science as we know involves steps like sprouting of new curiosities in mind, formulation of a hypothesis and then various tests to verify its validity and reaching the conclusion accordingly. Science fiction must respect the methodology of science and should not be illogical and irrational insofar as the contents and themes of stories are concerned.

Science Fiction Vs Fantasy

Fantasy is usually defined as a work that takes place in a nonexistent and unreal world, such as a fairyland, or concerns incredible and unreal characters while science fantasy employs physical and scientific principles not yet discovered and not contrary to present knowledge. Works of fantasy to which we are very familiar are Alice’s Adventures in Wonderland, Lord of the Rings and the Harry Potter series.

Here authors may enjoy all the liberty to use even far-fetched assumptions like unicorns, multi legged creatures, talking animals and many forms of monsters and ghosts (like Frankenstein!) in their themes of choice. But in science fantasy/fiction
there must be some possibility that the described characters or events could possibly happen. Miriam Allen de Ford (21 August 1888–22 February 1975) perhaps explains the difference more lucidly: “Science fiction deals with improbable possibilities, fantasy with plausible impossibilities.” It is a common practice amongst science fiction writers to not contradict known scientific facts while the author of fantasy does not feel any such restraints.

Is there any difference in the terms ‘science fiction’ and ‘science fantasy’? Fiction is a Latin word which means ‘to invent’ while fantasy is a Greek word meaning ‘to imagine’. Both are in fact lumped together in general understanding of science fiction and have often been addressed as ‘surrealistic fiction’ which is simply put as super realistic fiction. In science fiction, science and technology is depicted without any distortions of the facts while in science fantasy even wild imaginations are acceptable like time travel, anti gravity, faster than light (FTL) travels etc. According to Jayant Narlikar, noted Indian science fiction writer, many fantasy elements like journey faster than light could make the science story a bad one despite its good style and form.

**Prophetic Vision**

Science fiction is known for the ability of its practitioners, that is, the science fiction writers to predict future events. Jules Verne envisioned a submarine run on electric batteries and a rocket to the moon launched from Cape Canaveral, more than a century ago which in turn inspired the making of the first nuclear submarine, the Nautilus, and the Apollo space programmes. Novels of H.G. Wells (21 September 1866–13 August 1946) led to the advent of battle tanks, air forces and atomic bombs. Likewise, Arthur C. Clarke’s (16 December 1917–19 March 2008) fictional idea made the geosynchronous satellites a reality, which ultimately led to today’s satellite television.

Owing to this capacity of visualizing the future, science fiction writers used to be world-famous, and even consultants with heads of state in many developed countries. Greg Bear (20 August 1951), a celebrated contemporary American science fiction writer, advises the FBI on many issues of crucial strategic importance.

**A Brief History**

Edgar Allan Poe (19 January 1809–7 October 1849) is often credited along with Jules Verne and H.G. Wells as being one of the founders of modern science fiction. Poe’s story *The Balloon Hoax* was an instant hit and perhaps inspired many later stories written on man’s victory over the moon. But the majority opinion supports Frankenstein (1818) by Mary Wollstonecraft Shelly as being the first modern work of science fiction.

But the author who started writing science fiction the way we know it today is undoubtedly Jules Verne. His most famous novels are *From the Earth to the Moon* (1873) and *Journey to the Centre of the Earth* (1864). Later Wells’s *The War of the Worlds* by H.G. Wells attracted wide readership.

**A scene from the movie A Journey to the Centre of the Earth based on the novel by H.G. Wells (above)**

A scene from the movie *Starship Troopers* based on the novel of the same name by Robert Heinlein

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Worlds (1898) and The Time Machine: An Invention (1895) attracted wide readership. The Time Machine talked of time travel far into the future being possible. The protagonist – the time traveler – returns and describes how evolution has made human beings split up into two races of gullible Eloise and the disgusting Morlocks.

In 1926, science fiction magazine Amazing Stories appeared and the editor was the journalist and publisher Hugo Gernsback (16 August 1884–19 August 1967), who labeled those stories under “scientification”. The year 1937 witnessed another great editor of science fiction, John W. Campbell Jr. (8 June 1910–11 July 1971) who started publication of Astounding Science Fiction and published stories of such writers as Isaac Asimov, Arthur C. Clarke, and Robert A. Heinlein.

In the years that followed, science fiction became a subculture with authors, editors, and fans. Some more magazines were started notably Galaxy (1950) and The Magazine of Fantasy and Science Fiction (1949). When nuclear bombs were dropped in Nagasaki and Hiroshima exactly in a manner that science fiction writers had predicted, the genre got more promotion and found many new readers.

Science fiction began to be recognized as serious literature as readers were convinced that this new branch of literature could really predict the future.

**All time Great SF Movies!**

Outbreak
Strange Days
Twelve Monkeys
Water World
Independence Day
Solaris
Mars Attacks!
Contact
The Fifth Element
Gattaca
Men in Black
Starship Troopers
Armageddon
Dark City
The Truman Show
The Matrix (and its two sequels)
Star Wars
The Cell
X Men and its sequels
A.I.: Artificial Intelligence
Minority Report
 Terminator and its sequels
Eternal Sunshine of the Spotless Mind
Children of Men
Terminator Salvations
Transformer
Indiana Jones
The Day After Tomorrow
Crystal Zone
District 9
Avatar

**Some Indian SF Movies...**

Vahan ke Log
Mr. India
Koi Mil Gaya
Love Story 2050
Krish
Endhiran (Robot)

**Hard vs. Soft Science Fiction**

Science fiction is often categorized under hard and soft forms of science fiction writing. The term hard science fiction is reserved for stories that are built on science without any deviation from known facts and where explanations are given in a reliable way rather than in an imaginative manner. Here technology plays a major part.
In soft science fiction, the stories are built on human psychology and emotions. The new wave of science fiction writing is usually soft science fiction, while cyberpunk, which evolved out of the new wave, is in something of a shadow land between hard and soft science fiction. Some critics say that most of the stories written by Arthur C. Clarke are hard science fiction while those by Isaac Asimov are soft science fiction involving social angles and human values.

The Golden Age
The enormous growth of the genre lead to the Golden Age of science fiction when many big authors and novels appeared on the scene: A.E. Van Vogt (26 April 1912 – 26 January 2000) with Slan (1940); Isaac Asimov with Foundation (1951); Robert A. Heinlein with Starship Troopers (1959) and Stranger in a Strange Land (1961), and Theodore Sturgeon (26 February 1918-8 May 1985) with More than Human (1953).
Science fiction is often categorized under hard and soft forms of science fiction writing. The term hard science fiction is reserved for stories that are built on science without any deviation from known facts and where explanations are given in a reliable way rather than in an imaginative manner.

Philip K. Dick’s (16 December 1928–2 March 1982) most famous title Do Android Dream of Electric Sheep (1968) on which a movie was made in 1982 named “Blade Runner” also appeared. In the 50s of the last century, Arthur C. Clarke’s 2001: A Space Odyssey (1968), Fredric Pohl and Kurt Vonnegut’s The Sirens of Titan (1959) appeared and were considered to be the part of the same Golden Age.

Sometime later, a ‘new wave’ in science fiction writing appeared on the horizon and focused on the psychological aspects rather than technology oriented “hard science fiction”. Important ingredients of the new wave were drugs, overpopulation, disasters, and sex. This new trend was represented by famous science fiction authors like Brian Aldiss (18 August 1925–) and J.G. Ballard (15 November 1930–19 April 2009).

With the advent of computers there were new themes in science fiction resulting into a hitherto unfamiliar way of literary writing termed ‘cyberpunk’. This was acknowledged very soon as a subgenre of science fiction writing. The representative work of cyberpunk was Neuromancer a debut novel by William Gibson (17 March 1948–). In cyberpunk, stories usually take place in the fantastic virtual worlds created through Internet that are still not affected by air pollution and decay. Popular movies in the subgenre of cyberpunk were “Blade Runner” (1982), "Videodrome" (1983) etc.

Popular Major Themes

Major themes of science fiction that continue to grab attention of audiences worldwide include space travels (viz., “Star Wars” and “Star Trek”), time travel (viz., “Back to the Future”), psychological or biological changes in man (viz., “The Incredible Hulk”), supernatural characters (viz., Superman, Spiderman, Batman), alternate universe (viz., “Star Wars”) etc. Apocalyptic science fiction, which incorporates end of world stories, alien invasions, utopias and dystopias, alternate history/universe, are some other most popular themes.

Terms like Robots, Androids, Cyborgs, Clones, Cyberpunk/Virtual Reality, Pantropy, Genetic engineering, and nanotechnology etc are very familiar to these themes. Cyberpunk is the fairly recent genre of dystopic (opposite, utopian) near-future world where there is global connectivity and communication through the web, bio/techno enhancements, and a mood of alienation, resistance, often sex and graphic violence. Virtual reality, holographic simulations, artificial intelligence also make frequent appearances in these themes.

Popular science fiction themes in India include space travels, environmental imbalance, population explosion, material transfer, clones, memory transfer, planetary travels, innovations in medicine etc. Since science fiction is imaginatively a very fertile field science fiction writers are trying on many themes of their choice.

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