

## The Evolution of Science Fiction and Post-Humanism

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### Abstract

The present work explores the evolution of the genre of Science Fiction and how its development paved the way for Post-Humanism. The paper attempts to evaluate early works in the field of Science Fiction and the major themes undertaken in the genre. It also evaluates the popular sub genres of Science Fiction and how it is different from sheer fantasy and magic. The latter half of the work focuses on the Post-Humanism, its evolution, popular terminology and its drift from Humanism.

**Keywords:** *Science Fiction, Post-Humanism, Cyborg*

The Science Fiction genre is one of the predominant genres of fiction in the 21<sup>st</sup> century, dealing with the advancements in science and technology. The genre Science Fiction incorporates elements like Romance, Fantasy, Magic Realism and Prophecy. J.A. Cuddon is of the view that there is an abundance of publications under the banner of science fiction and as a mode it is a diversified one that sans any fixed definition (Cuddon 791). As per *The Oxford Dictionary*, Science Fiction is an “imaginative fiction based on postulated scientific discoveries or spectacular environmental change, frequently set in future or other planets, involving space and time travel”. According to Stevenson, that the speculative fiction genre of science fiction is based on some postulated scientific discoveries and it is this aspect that distinguishes science fiction from Fantasy and magic realism. He also talks of the “spectacular environmental changes” (Stevenson 230) that are primary in science fiction. The environment depicted in it is a speculative and futuristic environment subject to great changes either belonging to the future or another planet or universe. Apart from it, there are surreal elements of time and space. The definition of Science Fiction that came during the 1920s lacked the contemporary elements like the Robots, AI and Computer. Different practitioners of science fiction defined it differently. According to Isaac Asimov “social Science Fiction is that branch of literature which is concerned with the impact of scientific advance upon human beings” (Miller 8). Critics also emphasize on the relationship between human society, technology and science. Some critics are however unable to demarcate a clear cut boundary between science fiction and fantasy, whereas Kingsley

Amis draws a clear demarcation line indicating that Science Fiction represents an unfamiliar situation based on innovation, science and technology while a fantasy is based on sheer imagination alone. Miller defines Science Fiction as:

That class of prose narrative treating a situation that could not arise in the world we know, but which is hypnotized based on some innovation in science and technology, or pseudo-science or pseudo-technology. It is distinguished from pure fantasy by its need to achieve verisimilitude and the willing suspension of disbelief through scientific plausibility. (Miller 10)

Unlike a fantasy novel, verisimilitude is achieved on a ‘willing suspension of disbelief’ based on ‘scientific probabilities’ rather than pure chance or coincidence.

The critic Darko Suvin coined the term “novum”, which means new in Latin. ‘Nova’ is the plural form of “novum” refers to the singular. In other words it refers to a ‘point of difference’. In the *History of Science Fiction*, Adam Roberts explains that ‘novum’ is something that portrays a world different from a real world. Nova can be today’s humanoid, robot, the time machine or the artificial intelligence. It can also be the communication device used in the William Gibson’s *Neuromancer*. Therefore nova can be the scientific invention or creation on which the science fiction can be based. Nova can be a device as in Jules Verne’s *Twenty Thousand Leagues Under the Sea* (1870) that empowers the protagonist to travel under the water. Darko Suvin defines Science Fiction as “a literary genre whose necessary and sufficient conditions are the presence and interaction of estrangement and cognition, and whose main formal device is an imaginative framework alternative to authors empirical environment.” (314). The genre depicts the things and incidents that estrange the known and familiar facts from the unknown. Our relevance, comprehension and cognition to the contemporary world are estranged and the genre depicts this estrangement as well as relevance. It is based on a device of an imagined and alternate world, space and time to that of the author and reader.

The origin of science fiction is a contestational area especially tracing its genesis and defining its form. Science fiction, though seemingly new is an oldest form of fiction with the critics tracing its origins in the fiction of Jules Verne and H.G Wells. There are critics who consider Mary Shelley’s *Frankenstein* (1818) as a starting point in the genre of science Fiction. It is about the ability of science and scientists whose creation of a creature goes out of control. Some traces of Science Fiction can also be traced in the Greek study of the Cosmos and the Greek science that has provided an unimaginable scientific imagination and speculation with the scientists. The Greek scientists believed in the notion of stars as fire glimpses surrounding Earth. This theory was modified by Pythagoras adding that all planets revolve around a single scale whose orbit is said to be determined by a divine spirit. Later on Aristotle gave his theory of concentric spheres citing the four important elements to be earth, water, air and fire. During this time, the earth, the moon and the sun were represented in the “proto-Science Fiction” (James, 55). These types of writings consisted of extra-terrestrial journeys as found in works like

*Gilgamesh, Ballerophontes and Eomnium Scipiond.* The earliest Science Fiction represented the outer sky and the outer voyages to the moon. In this regard Lucian (Samoset) is considered to be the earliest writers of Science Fiction authoring around eighty writings of this kind. This kind of Science Fiction that evolved during the Classical times went into slumber for quite a long period due to the increased hold of religion and Christianity in the West. The wakeup call for the Science Fiction was later given in the Seventeenth century that was an Age of Reason and scientific knowledge. The Age of enlightenment gave a reason to the authors to promote their scientific discoveries through fiction.

Copernicus is considered to be the father of Modern Science Fiction. Nikolaj Kopernik, in his *On the Revolution of the Celestial Orb* (1543) laid the foundation of the theory of rotation of planets around the sun. His discoveries and studies shook theology and religion and he redirected the cosmology away from the clutches of theology. His discoveries fueled the writers' imagination and faculties. John Kepler, Galileo's contemporary summed up his journey to the space in *Somnium*.

Eighteenth century saw ground breaking developments in the writings of Voltaire and Swift. Voltaire summed up his scientific temper in his *Mecromegas* describing a huge alien travelling through the universe and narrating it. Nineteenth Century saw Mary Shelly, Edgar Allen Poe, Jean-Baptiste Francis Xavier, Charlotte Smith and George Gordon who experimented with their futuristic imagination and laid the foundations of Science Fiction. Introduction of the modern day Robot was seen in the form of the automaton developed by Mary Shelley in *Frankenstein*. It talks about a scientist who breathes in a new life in the dead remains of human and giving the new creature superpowers. It could be read as a prophecy for unrestricted scientific inventions which could prove fatal for mankind. Newton's laws on gravity further boosted the scientific writings which could be seen in Verne's and Poe's writings *From the Earth to the Moon* and *Hans Pfaall*. Poe also explored the effect of science on man in his work *The Colloque of Monos and Una*. The writers of Nineteenth Century also explored the voyages in balloons and against gravity in works like *Balloon Across Africa*, *The Journey to the Centre of the Earth*, *Five Weeks in a Balloon* and *Twenty thousand leagues under the Sun*.

Another revolution in the field of Science Fiction was seen in the works of Wells and Huxley. Well's *The Time Machine* is a futurist time travel writing. His novel *The War of the World* is about an extra terrestrial invasion of humans on earth. The last quarter of Nineteenth Century and the first half of the Twentieth century were dominated by the American writers of Science Fiction. It was further popularized by some cheaper versions like the 'Dime Novels' that were affordable by common man. The Dime novels were replaced by a much cheaper form of the 'Pulp' writings. The introduction of Science Fiction Comics and the Science Fiction Comic Strips made it available to almost all age groups of the readers. This popularization of the genre brought about a Golden Age of Science Fiction creating characters like *Superman*. It also popularized the short story sub genre in the field. Frank Hubert gave the best selling *Dune*

novels, raising ecological concerns. The mid 20<sup>th</sup> century saw the New Wave Science Fiction, also contemporary of the new wave of the French Cinema. The New wave refers to novel stylistic, content and form features. The space travels by Russian and American Astronauts also triggered the development of modern Science Fiction. The latter half of the twentieth century saw a plethora of scientific writers who dwelled on the sub genre of Hard Science Fiction. Space Opera or a narrative about an exploration into the outer space is another subgenre of Science Fiction. The protagonist of this sub class of genre confronts against all odds like a superhero with extra human powers. Edmund Hamilton's *Interstellar Patrol Series* and E.E Doc Smith's *Lansman* are some of the popular Space Operas.

At this juncture, there was another development in the form of hard science fiction and soft science fiction. The former is purely based on the physical sciences like physics, chemistry, biology which form the basis of the narrative, whereas the latter dwells on the social aspect of science and its relationship with humans. Another subgenre is the Space operas where the narrative is placed outside in the outer space. The word "Robot" a derivative from Czech word for slave whereas "Android" is derived from Greek which means manlike. Androids seem to be intelligent machines made for the assistance of man. Its improved version came to be known as cyborg (the hybrid of man and machine). Robotics had appeared long way before the modern day robots and cyborgs. Nathaniel Hawthorn's *The Artist of Butterfly* is based on a gigantic mechanical butterfly. However it was Isaac Asimov who wrote extensively on robots in his *I, Robot* series. Various writers experimented differently on the advantages and the possible impacts of Robots on society and human beings. Philip k. Dick studied and worked extensively on Robots in *Do Android Dream of Electric Sheep (1968)* whose filmed version was titled as *Blade Runner*. He brings out the darker side of machines in his essay:

Someday human being may shoot a robot which has come out of General Electric Factory and, to his surprise to see it weep and bleed. And the dying robot may shoot back, and to its surprise, see a wisp of grey smoke arise from the electric pump that is supposed was the human's beating heart (Kucukalic, 72).

"Android" which means manlike is a concept of technology that has been extensively fictionalized by Isaac Asimov. "Cyborg" is an advanced version of machines that work, interact and to some extent even respond like humans. The cinematic series of *Star Trek* provide an ample evidence of the fictionalization of cyborg. Another popular cinematic text is the *Terminator* where there is a battle between pure machine and a cyborg. Science Fiction has also been popularized in the form of series of alternate histories and time dilations. It is all about the technology i.e. central to human existence. Alternate history sub genre also dwells on the fictionalized or imagined histories or futures. It is evidently reflected in Philip k. Dick's *The Man in High Castle* (1962).

Apart from space travel or travel through time, another dominant theme occupying the Science Fiction is the Future Warfare evident in writings like *The Battle of Dorking (1871)*, *Starship Troopers (1959)*, *Heinlein(1988)*, *Hammers Summers (1979)*, *Darke (1945)*.

Modern Science Fiction deals with the superhuman powers of human beings which were popularized by popular comics like Action Comics and DC Comics. Another version of Science Fiction can be read in the form of Cyberpunk popularized in the late twentieth century. The term was first coined by Bruce Bethke, an American writer through his short story titled as *Cyberpunk (1983)*. It is a popular movement representing the high technology and the changing social scenario. The dominant themes of this particular subgenre are futurist regimes depicting a dark, bleak and grim side of society dependent on technology. The Publication of *Neuromancer (1984)* set the ball rolling for the cyberpunk fiction, fictionalizing the virtual reality and the artificial intelligence called the cyberspace.

Science Fiction which can be studied under the rubrics of Post-Humanism is not a complete break off from humanism. It is a metaphoric extension beyond the Humanism wherein the focus of study has been shifted from the human to the digital or the virtual. This shift had been predicted long ago by the exponents of Science Fiction. Ihab Hassan had talked about this transformation in *Prometheus as Performer (1977)*. Some writers have attempted to define Post-Humanism in the domain of technology, cyberspace, cyborgs, humanoids and artificial intelligence. However, Katherine N. Hayles tried to differentiate the cyborg from the transhuman in *How we became Post-Human (1999)*. She considers Post-Humanism as a collective term for the entire progress in the field of technology and computers. According to her:

The post-human, although it is still a nascent concept, is already so complex that it involves a range of cultural and technical sites, including nanotechnology, microbiology, virtual reality, artificial life, nano physiology, artificial intelligence and cognitive science among other. (247)

The term “Post-human” has a broader domain and usage. According to Hayles in *How We Became Post-human (1999)*, the state of distributed cognition in humans defines the Post Human condition. (Hayles 1). Gibson’s science fiction articulates the state the post-humans that go beyond the immediate materiality of humans wherein the machines, technology and artificial intelligence are used to reflect the distributed cognition of humans. This post-human landscape is replete with post-human beings in a post humanist environment. His fiction deals with the technologies of today that have dangerous implications of domination and monopoly in the near future.

Post- Humanism considers fluidity of information in the form of the data stored, which is indispensable in the age of virtual reality as compared to the human body. It has acquired the status of ‘anthropocene’ where human intelligence has acquired mastery over technology as well as awareness about the hazards of this shift. Whereas there are thinkers and writers like Fukuyama who try to comprehend the human nature in the age of biological and genetic

engineering. Hans Moravec has rightly predicted in *Mind Children: The Future of Robots and Human Intelligence* (1988) that human subjectivity, consciousness and identity is fluid and can be aptly downloaded in the form of neurons from the brain and transmitted into the virtual world. In the post-human world individuals are dehumanized and treated as mere informatics and data. This idea of dematerialization of individuals has been emphasized in Gibson's *Neuromancer* also.

In this age of informatics, it is not clear as to who controls whom? Whether the humans control technology or the technology is controlling the human. Whether humans are developing technology or the technology is creating a new race of Post-Humans? There are programmed systems and updates that work on their own without the intervention of humans to upgrade their efficiency or skills. So the role of humans becomes questionable. The Post-Human technology has surpassed the limits imposed on the human intelligence. Even the qualities like judgment and sentiments are being transferred to the machine and man is moving down from the hierarchy. Joseph Weizenbaum is skeptic of this development and forewarns the world against this development. Machines should not be allowed to compromise and alter human decisions.

Robert Pepperell talks about the evolution of the Post-Human condition as:

First, it used to mark the end of that period of social development known as humanism, and so in this sense it means 'after humanism'. Second, it refers to the fact that our traditional view of what constitutes a human being is now undergoing a profound transformation. It is argued that we can no longer think about being human in the same way we used to. Third, the term refers to the point where they are increasingly becoming indistinguishable. (14)

Some critics consider it as a shift from the period of humanism to a conglomeration of biology and technology. Pearce considers Post-Human as "a hypothetical being whose basic capabilities are so radically exceeded to those of the present human as to no longer unambiguously human by current standards" (21). It is therefore a "beta version of the post-human" (Donna Haraway 117). It is a fluid and dynamic entity. Some critics also consider it as an end of anthropocentrism, a termination of man centered world and universe, whereas others consider it as a mutual co-existence of men and machines. The Post-Human that ultimately evolves is genometrically the same species but exponentially a different one with enhanced intelligence and capabilities. It has removed the limitations of dependency, cognition, emotion and performance in the new Post-Humans. Francesca Ferrando attributes this post condition with three attributes, namely- the Post-Humanism, the Post-Anthropocentrism and the Post-Dualism. She traces the origin of this condition from the Post Modern theories of Feminism, Marxism, Post-Colonialism, Post Structuralism, and the Cultural studies. Her Post-Anthropocentrism marks a shift from the human centric approaches and her Post-Dualism is a shift away from the duality of entities like humans and technology. There is no absolute dichotomy as the one cannot be separated from the other.

It can therefore be concluded that Science Fiction as a genre is a complex and ever evolving genre of literature which is currently being studied under the premise of Post-Humanism. It lacks any rigid definition as it can be studied as a fantastical, imaginative, speculative fiction which is purely based on scientific and technological advancements in the field of digital world. It focuses on a shift from the human centric worldview to a technology centric worldview. It is the writers' fascination with cyborgs, robots, humanoids, artificial intelligence, aliens and so on. It has a huge scope in the future ahead where the impact of technology on humans have been introspected both positively as well as negatively also.

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