Chapter -1

The Development Of Science Fiction From Proto- Science Fiction To Modern Age
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1: The early years: Its innocent Beginnings

To every literature there is a prehistoric period. In the case of Science fiction, proto SF throws light on some aspects of the genre. Science fiction could not begin so long as there was no true science in the ancient times. The subject of science has been touched upon by fantastic literature since ancient times. Man is no longer satisfied with the two inch long picture of domestic life on the ivory. He yearns for adventures and goes in to strange parts of the earth or universe. Therefore fantastic literature has been developed by literary men of the age. In pre science fiction period it was the mystic stories, Utopia and myths filled the function of the science fiction writers. Proto SF appeared in the form of Fantastic voyages, Utopias, Future wars and Gothic Romances, ideal cities, political upheavals, Lost world Tales and so on.

Proto SF: In pre-scientific times, it was the priest, wizards, Raj-Guru (Doctors) who filled the functions of wonders of nature laws. It was the traditional Guru who perceived as having the secret of curing diseases and had known the art of controlling the universe. The ancient myths and legends recorded in Mahabharata and Ramayana highlight the existence of supernatural powers. There are the legendary heroes, for instance in Ramayana who learnt to control over demon powers. Those ancient pieces of marvel stories still fascinate today. To cite another example of ‘Machine’ one may highlight the existence of aeroplane like ‘Pushpaka Vimana’ in the days of the Ramayana, the ancient epic of India but they do not bear any proof. Think of the monsters legend, the monkey man (Hanuman) the man goat (Daksha Brahma) Ravan (the man of ten heads), snake woman, fish woman and so on. In science fiction we have Island of Dr. Morreu’s creatures that are often built up on the same principle.
In ancient days myths and legends super power controlled by Gods and
demons who exercised their magical powers based on knowledge of universe,
magical skills Yagas, prayers, Tapasyas etc. science fiction on the other hand
works against the background of a science that is controlled by hypothetical
science which can in turn be explored by an understanding of universe. So
proto science period proved an accomplished literary form with popular themes
in fantasy.

1.1 The Moon Voyages – Historically, the roots of Today’s science fiction go
back to imaginative voyages of the Moon. The Greeks did a lot for imaginative
fiction. As Patrick Moore, the author of the chapter, “From Legend to Fiction”
in his Science and Fiction states, “It is usually claimed that science fiction
begins with the famous True History written by the Greek Satirist, Lucian of
Samosata, in the second Century A.D. This is probably correct, since if any
erlier Space stories were written have not come down to us.” (P.13) Moore
admits that True History is the earlier space story in science fiction. It is
pleasant reading of the Moon Voyage, Moon-Men – inhabitants of the Moon
planet, are more intelligent than earthlings. Lucian gives mythical accounts,
least concerned to scientific accuracy. He tries to picturise the adventures of a
party of sailors and their sea-faring skills. After seven days and seven nights of
the impending disaster, they finally have arrived to shining island i.e. Moon by
accident. But Lucian’s account of the story is reviving the Greek mythology as
it does not give objective study of science. “In his words, the story describes
things which he had neither seen nor suffered nor learned from another, things
which are not and never could have been, therefore should my readers by no
means believe them”. (P.16- quoted by Patrick Moore the author of the chapter,
“From Legend to Fiction” in his Science and Fiction) Unfortunately, True
History is not to be treated as science fiction, but it is historically a root to
future cosmic travel story.

Lucian produced one more the Moon Voyage Story i.e. Icarome nippus
in which he describes the hero’s systematic planned trip, his quest for voyage
and final setting foot on the Moon. But unfortunately he is sent back to his native planet because of divine displeasure. The story became more divine than scientific facts. Lucian here again has his limitations to make it as science fiction. Mainly Lucian has written above stories for fun or satire, not interested in logic of science.

In the Seventeenth Century, the idea of moon voyages became so popular and more properly works of fantasy than science fiction. It was Johann Kepler’s cosmic travel story, Somnium published in 1634, the same year the ‘The True history’ of the moon and its inhabitants as written by Lucian of Samosata was first published in English. Johann Kepler was a celebrated writer and his visions probably to support the argument for earth’s motion as suggested by Copernicus. He was a famous astronomer and mathematician, took many years for completing the detail description of movements of Mars, planetary motion, wonders of astronomy, gravity, the moon-folk, in a story. He spent many years on his notes. He did not publish the book during his life time. He died before the book was completely finished. His step son took over the task of publishing it but not, he also died. Finally, his son Ludwig Kepler published in its final form in 1634.

Kepler’s Somnium; the Dream or posthumous work on lunar astronomy, tells us the story of a young Duracotus and his wonderful visions, predicts possible challenges, in reading the Moon and his final landing on the moon. The story describes a journey to the moon and its serpent like inhabitants – not like human very strange creatures. He describes magnetic influence of the earth. As we go higher in the air, our limbs are curled up. Duracotus relates that his limbs are curled up like those of spider. As Patrick Moore the author of the chapter, “From Legend to Fiction” in his Science and Fiction observes, “The Somnium is of distinct value. More clearly than in any other of his works, it shows that Kepler had a good idea of Newtonian gravitation even though he could not put into mathematical form”(P.31). More admits that his speculations, basic conception as an imaginary Moon voyage are not scientific
flaws. He was concerned with scientific accuracy. Kepler notes that the Laws of planetary motion and supports that earth revolves round the sun.

In *Somnium* the mode of transport is demon’s power, how they pull Duracotus from underneath and lift the person into the air. Duracotus experiences the change in his body mechanism due to gravity. His science is pure and simple when the hero reaches the moon, Kepler records that the Moon is not self luminous and shines only of getting the light of the sun. He throws light on lunar eclipse. When the Moon turns a dim, lunar eclipse do not happen often but only wing to the tilt of the Moon’s orbit. Kepler’s *Somnium* describes a geographical details of the moon, flora, fauna and how their behaviour during day and night. The story is in the form of a dream and presents interesting cosmological ideas about the Moon voyage.

It was fitting that the next cosmic travel story should be written by a man of imagination and fancy.

He was Francis Godwin, published *The Man in the Moon* in London in 1638. The exact date of its completion is unknown. The Man in the Moon is written in the first person perspective. The protagonist Domingo Gonzales, a young Spaniard- an adventurer type hero, met with incredible adventures in his life. He travels to the Moon, through the Machine, powered by a flock of migratory birds. He takes fancy in taming the wild gansas – Swan like birds. He teaches them to fly in the air at a given signal to carry small burdens through the air. These experiments with, gansas, put in his mind more trusting idea, why should they not tow a man on a raft?. He devised a raft, which allows his gansas to lift him up in the air. The birds fly up to the moon because it is their natural migration; So Ganzales reaches to the moon. He is not meant to fly. The mode of transport here is self-devised machine powered by thirty or forty young gansas. So Godwin’s reaching the moon is pure fantasy.

He meets the Lunar, a race of moon-dwellers; they are larger, thirty feet tall who avoid sunlight. All things living on the moon are larger than the earth. The trees are three times higher than our highest trees. The shortest of Moon-
Men, a mere ten to twelve feet tall. Ganzales himself only is six feet height. Ganzales meets the mighty prince Irdonzur and other members of the party in power. His stay was memorable there. He remains there for two years.

Life on the moon is colourful and beautiful. The Moon-Men are intelligent, kind, lead a life of peace in their society. They have no crimes. They are healthy, no fear of sickness there and they have certain plants that heal all ailments. Godwin’s description of the Moon – land is a delightful account. The whole book shows that it is a Utopian Society portrays perfect life on the Moon. The Lunar, The inhabitants are equally interesting caricatures.

Gonzales return journey takes place not through gansas because three of them have already died. He mounts his raft and flies home, within nine days. This journey takes only nine days whereas outward trip to the moon had taken twelve days. This is due to the magnetic power of the earth.

Godwin’s ‘The Man in the Moon’ is said to have influenced the tales of science fiction of the next two centuries. Many science fictions borrowed the theme of Moon voyage its extra terrestrial beings and intelligent society from it.

Bishop Godwin’s story had an immediate literacy influence on the most literacy figures & scientists of the period. Shortly after Godwin’s tale was published there appeared a work by John Wilkins entitled, The Discovery of a World in the Moone; or a discourse tending to prove that it is probable there be another habitable world in that planet. Being a scientist Wilkins stressed on scientific accuracy, encouraged a more scientific consideration toward Moon voyages. He was not an author of imaginary voyages, or fictions. But he was highly influenced by a fanciful voyage to the moon by Spanish adventurer Domingo Gonsales in Godwin’s Man in the Moon. The other influence was Kepler’s Sominium Posthumously published like Godwin’s book. Both of these were science fiction fantasies but Wilkins tries to get a glimpse of things that later turn out to be the logistics of a possible voyage.
Wilkin’s ‘Discovery was originally published in 1638 and contained 13 propositions’ or chapters which sets out to prove the same interesting facts about that astronomical bodies were made of a special non-earthly substance.

The next effort was still concerned with Moon voyage was Cyrano de Bergerac published *The Other World*, or the states and empires of the Moon (1656) and Sun (1661). Cyrano sent his character to the moon by rocket, which is more improved than other devices used by his predecessors. It offers startlingly better suited device which can carry men across the void. In the initial stage Cyranode Bergerac tried many methods to travel to the moon; some comic like covering oneself in bottle, filled with dew, the idea is the sun seems to suck up dew. As the sun heats them lift him up into the sky. His second attempt, he made a flying device, but met with equal ill-fortune, he fell down on the ground, wounded his body. But Cyrano continued his journey. He however keeps on rising; this is due to the ointment of marrowbone he applied on bruises to recover from his previous wounds and this marrow was sucked up by the waning moon. This is the way Bergerac travels to the moon.

In his second attempt, he was more serious, employed prophetic and astounding device i.e. Rocket which is popular in modern days. The Rocket propulsion – a box shaped craft works by ‘reaction’ does not need air to push. There are plenty of other means to travel to the moon are suggested. He meets Domingo Gopzales, who became his companion when he stayed on the moon.

From the story we can derive that Cyrano gives an interesting place on the moon that is ‘The Garden of Eden’ and another place where strange creatures are inhabited. The story combines two elements; Beauty and Beast. The protagonist enjoys boundless beauties of nature in paradise, Beautiful objects, please his eyes. The nature showers her beauty everywhere. The fruit trees bore the fruits of knowledge. It is a perennial joy. There are many beautiful things of nature like baboons and birds are seen. The protagonist visits another place where strange monsters reside. These strange monsters are quite intelligent like earlier accounts of interplanetary stories. They do not eat
but fill themselves with the aroma of the meals. They are strange, peculiar and intelligent enough to hold philosophical discussions. The protagonist is to prove himself according to their level. Cyrano presents intelligent discussion between the hero and Moon-men which is quite philosophical.

Overall the book is recording fanciful ideas about the other world i.e. ‘the Moon’ like our own, which sees the earth as a Moon itself Cyrano’s facts regarding modes of transport are being mixed with fancy. As Patrick Moore the author of the chapter, “From Legend to Fiction” in his *Science and Fiction* observes, “He was not attempting a scientific treatise disguising as fiction, and would in fact, have been incapable of any such thing. He was concerned with pure fantasy, and he would have been astounded to learn that had hit upon the vital truth that rockets and rockets, can carry men across the void”(P.40).

Moore has admitted that the mode of transport i.e. Flying Machine chosen by Bergerac is based on scientific phenomena. But Cyrano himself had known that he had attempted pure science for devising his machine.

The Moon Voyage, however, have a long prehistory. The epics of early Greek Civilization, Indian epics of Ramayana, Mahabharata, feature super human beings and include a marvelous voyage to far distant worlds. The fantastic travel stories to the other world always provide interesting study material to science fiction. This traveler who went to other planets often returned to tell stories of strange creatures. The authors had neither seen nor suffered nor learned from another, but wrote down stories. Some of these stories revive the themes of ancient myths and were concerned with unknown worlds. Some of the stories were fiction but combines with them scientific facts and prophetic thinking which contemporary science fiction writers are still utilizing. Lucian’s work though it is merely a fantasy but sends his sailors to the moon and studies Moon-Men. Here mode of transport for reaching the moon is preposterous fantasy, but the theme highlights science fiction here and there.
Lucian’s voyage to the moon begins in a whirlwind, but focuses on science fiction in his detail description of the Moon-Men, the discovery of advanced beings and the battle in space. The work combines the elements of mystical, supernatural and science fiction and concludes by poking fun at the society. But in classical times he stood alone to present interplanetary story to the world.

The function of Moon voyages in their societies and beyond:

The genre of cosmic travel stories opened the way for a new vision of the universe. By implementing contemporary science along with mystical elements, the authors demonstrated their knowledge towards the logistics of a possible voyage. Some of the star stories spark one’s knowledge and have caught the imagination of modern readers. By focusing on the journey to the moon, the interplanetary stories are addressing more serious topics. They celebrate the laws of planetary motion, earth-moon analogy, and life on the moon and give vivid descriptions of the lunar landscape. Of equal interest to the student of Modern Science is writer’s detailed analysis of the life forms that inhabit the Moon. Modern Astronomy has proved there is organic life form existed on the Moon. In each story the start of the journey is requires suitable mode of transport. In Somnium the mode of transport is not machine It is not markedly different from that outlined by Lucian. We are informed the Levanian’s group push and lift the person into the air, when the moon begins to be eclipsed on its eastern side. Godwin’s hero Gonsales travels with the aid of bird power i.e. gansas lift the raft, able to continue a great flight. Later, Cyrano de Bergerac’s the mode of transport; rocket is based on true science. Each one tries to overcome the magnetic influence of the earth, guess intelligently their own ways of transports which later improvised in modern Age.

The most eminent astrologer Johann Kepler was not only a mere writer of fiction, but proved once more Copernicus theory, earth revolves round the sun. What Kepler had theorised in the Somnium was proved by Galileo’s telescope usually. His Somnium begins like a classical legend but ends with
Kepler’s findings an celestial phenomena. The interplanetary stories, no doubt mix fact and fantasy but the themes are bright as the shining stars.

1.2 Utopia

As per as British history is concerned, the seed of SF sowed first in the work of Tomas More’s ‘Utopia’ in 1516. As Darko Suvin the author of the chapter “Science Fiction and Utopian Fiction: Degrees of Kinship” in Positions and Presuppositions in Science Fiction observes, “Utopian fiction is socio-political subgenre of SF, it is social science fiction or SF restricted to the field of socio-political relationships or to socio-political constructs understood as crucial for the destiny of people” (P.38) – Darko Suvin admits that historically Utopian fiction is not only root of SF, it is also Social-Science-fiction i.e. Social and science ideas are embedded in fantasy Utopia constructs good wishful world constructed by human beings – by their efforts, Similarly SF is built on those guidelines. In the history of utopian and science fiction, the myriad forms of the utopian imagination truly emerged in popular culture.

Thomas More’s Utopia implying the noble land, impossibility of the perfect state which was meticulously built by its author intended to mean “now where”. The concepts of wise and noble lands are common utopias structures of SF utopia stories gave added impetus to the SF stories. Utopian thought and expressions are mind boggling, a happier kind of life existing somewhere. Utopian literature is immensely dwells on society and social suggestion of what could be the purpose and achievement of utopia has been made possible by waking dream wish fulfillment. This concept that pervaded later works of speculative fiction. More’s speculations found to be aimed at balanced development of the villages and cities, fundamental to science fiction an economic well being of the country; change in the mode of economy and improving social conditions of the poor peasants. Rural peasants starved without food where they were denied the livelihood very few shepherds were in the employ of the lord of the Manor. The poor peasants flocked to the cities but failed to get suitable jobs there More’s Utopia found jobs for poor peasants by
new social arrangements where certain side of society especially poor peasants suffer from the nation’s poor conditions. More’s ideas are praise worthy became fundamental solution to modern economy. It describes an ideal society and satirises the existing English Society. It reinforces alternate world. It renders the work science-fictional where everybody coexists comfortably on a fictional land. More’s Utopia introduces a changing formula in the form of revolutionary ideas. He is more revolutionary in this aspect. Today’s SF loves to use the Utopian structure to describe pleasant SF type of story.

It is pity More wrote utopia in Latin, for as such it does not belong strictly to English literature. The ideas presented here are more political, social and economic rather than science fiction writings. However it inaugurates a tradition of Science fiction because More’s envisioned improved society though based on generosity, dignity, his island in a highly featured by new innovative ideas and co-operative simplicity. This world is interpreted on scientific basis.

Like More’s Utopia, there is another Utopia gained its central laboratory and its temple in the Royal Society which grew out of informed meetings, held in Oxford and London of small group of scientists and received its character in 1662. The Royal society, the object of which was to advance the cause of science was itself based on suggestions which Bacon had dropped in his New Atlantic in 1629. The two fictions project the difference between Utopian transformation and a technological transformation Baconian Utopia describes an imaginary island in the pacific inhabited by scholars and scientists. As Raymond Williams the author of the chapter “Utopia and Science Fiction” in Science Fiction: A Critical Guide observes,

“It can be agreed that two fictions exemplify the difference between a willed general transformation and a technological transformations; that More projects a commonwealth in which men live and feel differently while Bacon projects a highly specialized unequal but afferent and efficient social order.” (P.55)
Bacon achieves it by his profound knowledge of science worth. Williams asserts that More’s Utopia is an imaginary island whereas Bacon’s Utopia is a technical discovery. Bacon uses this knowledge of science to bring relief to man’s problems.

The discoveries Solomon’s House in the mythical South American nation of Bensalem is important for understanding Bacon’ real but deep rooted in modern science. As Stephen A. McKnight, the author of the chapter “Francis Bacon’s God” observes, “Because Howard White and others have argued that Bacon’s use of biblical images and religious themes in cynical and transforms a spiritual quest into a material hedonism.” (P.19) Stephen admits that the religion transforms into a discovery. White is especially interested in Baconian philosophy of glorification of the power of science to serve the interests of the secular state.

Bacon repeatedly stresses the knowledge of nature that helpful to do research in science. As directed by an organization found in Soloman House, a group of philosophers try to dedicate themselves to scientific research and human improvement. Bacon is the first Utopian writer linked the knowledge of science to bring relief to man’s problems or benefit of mankind. Baconian philosophers were motivated by piety, mercy and charity that enabled there to discover useful information to meet the needs of people. Francis Bacon’s God is none but quest of modern science. Bacon’s own society is an ideal society; it is highly specialized, characterized by human piety humanity and science. Bacon himself conducted scientific experimentation. The inventions developed by the citizens of Bensalem are vivisection, telescopes, and microscopes.

**1.3 The Fantastic Voyages**

The Fantastic voyages continued to dominate the literature of eighteenth century. With the advent of the eighteenth century, we came to the period in the virtue of the complete knowledge, especially scientific, material knowledge. The stories of an imaginary sea voyages were written, especially Jonathan Swift, and his contemporary genius Daniel Defoe where most note worthy.
Swift’s Gulliver travels remain one of the most famous novels of the eighteenth century. Defoe also adopted himself to the rapid changes in Robinson Crusoe and sent his hero to a deserted island. Both sea voyages gave added impetus to the Fantastic writings in science fiction. What these two works articulate is something remarkable about SF itself. They add marvels to a traditional narrative framework.

The first hero of Fantastic voyage, who adapted himself to island adventures, is Robinson Crusoe. At the age of sixty, Daniel Defoe turned his attention to the writing of prose fiction, Robinson Crusoe – the book made him world famous novelist, was published in 1719. The adventures are narrated by Robinson in the first person with such vividness and circumstantial detail that the total effect is one of perfect illusions of truth. As J.D. Bernal the author of the chapter “The Wood and Feather Milleniums” observes, “His masterpiece, Robinson Crusoe, came later in 1719 and presented plot elements which fantasy and science fiction writers have used again, again, such as the castaway as representative of the human race dedicated to knowledge, the mysterious intruder, the naïve alien” (P.16). Bernal admits that Robinson was a man of knowledge, who applied his life skills scientifically to build his own life in deserted island.

One of the reasons for the enduring appeal of Defoe’s Robinsons Crusoe is its hero a man alone conquer an un-inhabited island, Defoe’s technique is highly praised in sketching a man of ordinary birth struggled under cosmos. Robinson dreamed only of seafaring skills, thereby seeking adventure of sea life abroad. His parents want him to pursue a career possibly in law but it is odd for a man of adventure to go into the law. He sets out sea again and again in-spite of failures, misfortunes that follows one after other. He invites the worst of all possible misfortunes dearly.

Crusoe’s maybe is an excellent plot source for the genre of science fiction because it sends a man to Unknown Island where he explores himself under unfavorable conditions through his reason, determination and natural
science. Crusoe lands in an inhospitable environment where wildness life is working all over the site.

Science fiction employs an element of stoic wild life again and again in stories acknowledge protagonist’s adventures and thrilling surviving skills in unknown place. Crusoe is smart in mastering his situation and controlling his environment. After his arrival to the island Crusoe does not lead a brutish way of life. He is fully aware of skills and remains conscious of him at all times. There are series of accounts throughout his narrative, describing the events of the first days on the island, little accounts of self, his thoughts about living, keeping of calendar, thus making the narrative absolutely convincing. He builds a home for himself a fenced inhabitant near a cave which he excavates. He creates a calendar. He tries to prepare cure his illness with strange mixtures of burnt tobacco. He hunts animals, grows barley and rice, learns to make pottery. He brings up a small parrot and teaches the parrot to speak. Finally he makes the parrot to speak his name. We see that in his normal day to day activities Crusoe feels the importance of his immediate surroundings we can sense that he builds eco-friendly relationship with leaving organism. He has spent months to teach words to the bird. He caresses an old He goat, dying of mere old age. He next describes how he buried the goat the next day. Crusoe teaches nature and mature in turn loves him. He studies animal instincts and shares his feelings units them. E becomes part and parcel of a desert island. He records its day to day changes in dumps head. He reads nature because of his needs. He learns to live and use his environment in a harmonious way. His island existence actually deepens the knowledge of Human environment. He learns new ways to use and change environment. He finds a pleasant valley abounding in grapes, where he builds a shady retreat. He develops his skills in basket weaving, bread making and pottery. He herds goats and invents a way to cook underground, with Robinson cruise’s theme of using environment harmonious way, Defoe paved the way for the central modern theme of environmental studies. Crusoe spends 28 years, two months and 19 days in this island seeks shelter and food for himself, creates his environment modified it
according to his necessities. He learns new ways to use and change environment. He perfectly builds bridge between the natural and human environment. He is the man who modifies natural environment for basic survival principles. As Harry F. Robins in his “How Smart was Robison Crusoe?” observes, “In spite of what he considered a paucity of tools, Crusoe became in his own opinion a competent “natural mechanic” (P.784). Robins states that crusoe though he is humble ordinary man but modifies natural environment according to his needs he loves to live alone in this ideal environment for many years. Robinson Crusoe is a found himself in desperate environment but true to modifies this natural environment where he breathes, the water he drinks, the food he eats and the land where he lives physically, emotionally and psychologically. Crusoe myth is distinguished from other forms of science fiction. In that their emphasis is on machine rather than on natural environment. Crusoe comes across with thirty cannibals, determines to demolish their power, continues to be vigilant and finally defeats most of the cannibals on share by his basic survival for existence. He protects one of the victims. Friday, and takes him as his servant. Life on the real island has become his physical survival, he has projected himself into the unknown landscape, encountered images of himself in the wild creatures, and he reared, became part and parcel of that wilderness and survived in the little cosmos.

**Swift’s Gulliver’s travels**

Jonathan Swift born on 1667 reaped a work of fantasy. His *Gulliver’s Travels*, originally titled as *Travels into Several Remote Nations of the World* in four parts is largely a travel story where the character travels through strange and unknown lands. He had been impressed by Sir Isaac Newton and mingled science in his works. He introduced science only to envision technological marvels in strange lands. The entire work on Gulliver Travels is divided into four BOOKS, recounting the adventures of Gulliver in four strange lands. As Wikipedia, the free encyclopedia quotes, “Published seven years after Daniel Defoe’s wildly successful *Robinson Crusoe*, Gulliver’s Travels may be read as
a systematic rebuttal of Defoe’s optimistic account of human capability” (http://en.wikipedia.org/wiki/gulliverstravels). Defoe believes in human being alone and his will be survived in an un-inhabitat Island. But Swift defends established societies and their extraordinary powers, nobility, military discipline, their learning, laws and customs. In each country, the inhabitants are peculiar strange, intelligent may be identifies as ALIENS. In the first part of the book, we find Gulliver is shipwrecked at strange land called Lilliputian where the inhabitants are six inches tall but are quick to take action in country politics. They use Gulliver’s powers to wage a war against the people of Blefusuca when the Lilliputians hate for doctrinal differences. The Lilliputians, for instance, are most excellent mechanics.

Five hundred carpenters and engineers were immediately set at work to prepare the greatest engine they had. It was a frame of wood raised three inches from the ground, about seven feet long, and four wide, moving upon twenty-two wheels. The shout I heard was upon the arrival of the engine, which it seems, set out in four hours after my landing. (Gulliver’s Travel P.19)

Like Lilliputians, the land of Brobdingnag where Gulliver undertakes his next sea voyage, also a land of strange giants called Brobdingnag. These giants prove to be friendly and curious governed by a sense of justice. Gulliver uses to describe Brobdingnagians are in reality very large (giant-like) human beings, and so are their city architecture was built. They have huge structures of building, books, library and temples and king’s place. Their size corresponds to the size of their art cultural art. The dimension of each building is described in the book, receiving particular attention. Gulliver describes one of their chief temples.

The country is well inhabited, for it contains fifty-one cities, near a hundred walled towns, and a great number of villages. To satisfy my curious reader, it may be sufficient to describe Lorbulgrud. This city stands upon almost two equal parts, on each side the river that passes
through. It contains above eighty thousand houses, and about six hundred thousand inhabitants. It is in length three GLOMGLUNGS (which make about fifty-four English miles) and two and a half in breadth; as I measured it myself in the royal map made by the kings order, which was laid on the ground on purpose for me, and extended a hundred feet: I paced the diameter and circumference several times barefoot, and computing by the scale, measured it pretty exactly. (P.115)

The Brobdingnagian’s each account of the metropolis proposes for correcting modern city map. The chief temple, king’s a place, travelling box made for Gulliver, king’s kitchen, are of great calculate size with excellent shapes. The Brobdingnogians excelled in mathematics and all mechanical architecture.

Next, Gulliver sets sail to Laputa where he finds wild impractical experimenters. Here island floats by magnetic levitation which oppresses the land below called Balnibarbi. Swift like Lucian satirizes Royal Society of Science its application to life that does little for betterment of people’s lives. In fact the floating island is become threat to Balnibarbi who are oppressed and crushed by lowering Laputa on to them. Their experimental science is failure and scientists themselves have lost with reality. They forget their daily activities. They are immoral, upset minded. Even their wives have maintained very low kind of life. The Laputa scientists turned to be terrorists, and oppressors, absorbed in their thoughts. In the larger context of Gulliver’s Journeys, they are figures of antiscience was a critic of the new fangled ideas springing from science the enlightenment period of great scientific, material knowledge. Even down below in Brobdingnagians, who inclined to practical applications failed utterly. Both are failures. The theories of Laputa have not improved common people in general only patronised rides rather than noor. Their practices turned them lunatics and disagreeable.

Finally, Gulliver sets forth to the land of Houhnhnms, a kind of a horse kingdom. They are happy harmonious creatures. He wants to stay with the
Houhnhnms and is banished. We see four lands with strange beings reveal different facts of the scientific ideology of Swift’s age.

1.4 Gothic Romance

The eighteenth Century stressed the supreme value of reason and the values that go with reason. The Industrial revolution is in full swing during by 1800, the engine of change began to transform every aspect of individual lives and wherever the Industrial Revolution took hold the rate of change increased in the single life time of an individual human being. People grow accustomed to a new way of life and to break painful customs by scientific temperament. Consequently it affected literature; some looked forward to change literary history also. A new form of literature popularly known as Gothic-fiction grew up to satisfy a passion for the Middle Ages, the wild, the sensational and the supernatural. The taste for Gothic spread between 1750 and 1830. Those changes which took place invariably the result of technological advance. The intermingling of the world of the novel and the world of science as the means by which a Gothic revival became a genuine cultural re-direction in literature. Some looked forward to the advance of science and technology as the means to abolish the old custom that are bonded them in vicious practices. Gothic horrors were often linked to the form of SF. The stock images of SF derive from Gothic sources, the alert spaceship (Castle) the monster (supernatural perils), Miracles (Supernatural apprehensions) space colonies (archaic settings) scientific element (supernatural historical romance) and an uncanny atmosphere of specialized form. The Gothic flame continued to flourish in the works of SF writers of today.

The Gothic novel became the ancestor of science fiction. It concentrated attention not on realism of the predecessors but on naturalism and out of the way things. Secondly Magic and Mystery constantly formed the wrap the woof of these romances. These romancers made attempt to produce romantic aroma in their factious work by landscapes saturated with hills rivers, field etc. As Eric S. Rabkin the author of the chapter “The Fantastic and Literary History” in
The Fantastic in Literature observes, “Gothicism is a literary movement that helped create the climate for the emergence in the nineteenth century of modern science fiction, the thriller, detective fiction and the psychological novel.” (P. 182) Rabkin admits that Gothicism played a great part in creating a special atmosphere of mystery and miracle and stimulating the emotions of wonder surprise at the background of romances which themselves laid foundations for modern science fiction, psychological novel and detective fiction.

Horace Walpole was the first great Gothic romancer introduced gigantic sizes uncontrolled ghastiness, a castle with secret passages, haunted rooms. And plentiful mysteries, inside the story. The fantastic events of ‘The Castle of Otranto’ are set in the middle ages and the story is full of Gothic supernatural apprehensions. “Walpole claimed that work was an attempt to blend the two kinds of Romance the ancient and the modern. In the former, all was imagination and improbability; later nature is always intended to be and sometimes has been copied with success” (P. 182 Quoted by Rabkin S. Eric in his “The Fantastic and Literary History” in The Fantastic in Literature).

Walpole explains that the work true culmination of Romance and naturalism, specifically the psychological truth behind the workings of nature.

Mrs. Ann Radcliff is the most successful producer of Gothic stories. Her novels abounded in mysterious incident and Gothic horror. She excelled in Gothic fantasy which is characteristics feature of scientific fantasy ultimately proves reality later stage. Radcliff excelled in natural description evoking a sense of truth and reality. As Eric .S. Rabkin the author of the chapter “The Fantastic and Literary History” in The Fantastic in Literature observes, “Ann Radcliff is the most important writer of these books which like ‘The Mysteries of Udolpho’ (1794) give the reader all the thrill of the super natural and then fame the delicious fear at the end by explaining the natural causes of the disturbing phenomena”. (P. 185)
Rabkin admits that the mysteries proved to be rationalised truth ultimately found to have purely natural origins. Her heroines were strong minded and courageous detective and if times permitted sent to time travelling. Emily’s reluctant journeys down to the catacombs beneath the castle bring chills to the readers even today.

Moers calls this travelling heroinism (heroinism in her witty distinction opposed to feminism) and draws a distinction between Radcliff’s heroines outdoor travels (particularly to Italy land of warmth sensuality rapture) and their indoor travels thorough the twisting ill-lit corridors of castles where they are tested for courage and endurance (P.25 Quoted by Lefanu Sarah in “Travelling Heroism”).

More’s states that Gothic heroines of Radcliff are travelling heroines, escape from monstrous house, do not afraid of mysterious castles. Emily dominates the scene, yearns for tough life and revelles in an uncanny atmosphere of wilderness of gloom and horror based on the supernatural. Like male protagonist of the science fiction she faces threats haunted forests and bewitching improbabilities.

Gothic romances made notable contribution to the development of the novel in the eighteenth century. They showed that outside the real world there is also world of wonder and light. Gothicism may be a basic mode of human knowledge. Gothic romances naturalized the supernatural element indeed. The mysterious happenings always have a natural and probable explanation in Gothic novels. They showed that outside the real world there is a world of mystery which has a purely natural origin.

Twenty years later, Mary Shelly’s Frankenstein published in 1818 which chilled readers with apparently supernatural goings and astounding scientific information. It belongs in part to the Gothic tradition of tales of terror popular at the time, but dealt with the creation of life not by Gothic apprehensions or the supernatural but by the reasoned application of scientific methods., Mary Shelly’s two novels, *The Last Man* (1826), and *Frankenstein* (1818) are
usually acknowledged as the beginning of the feminist science fiction or science fiction in general. It is first of the robot books. The picture of the monster which Mary Shelley had conjured is today the Machine man stalking about the world. We should look upon Mrs. Shelley as a forerunner of Wells. The monster of Mary Shelley is destructive where as modern Robot is no longer devilish entity. Today Robots have been produced with intelligent brains. The novel represents a new way of thinking.

Mary Shelley enraptures the public imagination by super natural apprehensions. Though it is a tale of horror, it takes us into the laboratory and shows the horrifying (Ghastly) researches. No wonder, this is one of the earliest science fiction novels because it attempts to inspire young scientists to make further possible experiments.

As in Frankenstein Mary Shelley shows herself as a science fiction pioneer and visionary in The Last Man which published in 1826. The novel epitomizes the author’s keen imagination one can envision through distant future. The Last Man recounts how by the year 2100 a virulent pandemic kills all human life on earth but the narrator Englishman named Lionel Varney alone survives and inhabits the earth. She also envisioned that in the distant future we would not be safe from disastrous epidemics. One can see Shelley’ been depressing and The Last Man reflects her views on materialistic value system in which women’s lives were increasingly conditioned. The future of mankind is dark and starting it is given that The Last Man recounts how by the year 2100 a virulent destroys life on earth. She appears to be more prophetic and visionary like all science fiction writers, that as to say the book records her unique vision of solidarity in the face of global catastrophe. The Last Man wonders all alone over a dead planet. He laments over the achievements of all human beings. He finds himself all alone in a plague-savaged world.

Another woman writer explores the secrets of life after death was Jane Webb Loudon (1807-1858). Both women could have been more alike to explore science and technology in a fantastic way. Their technological prophesies
created Stir in the minds of younger generation especially in an age of reproductive technology, cloning, artificial intelligence and robotics. The two women never met. It is interesting to speculate as to how they could have reacted had such a meeting been possible. Actually Jane Webb Loudon read Frankenstein and she did not like its theme. But the work might have inspired Loudon to write more improvised idea of technology superior to Frankenstein. Frankenstein’s creature is harmful, monstrous but Loudon’s Reanimated life not as cruel as that monster. Loudon’s The Mummy! A Tale of the Twenty second century (1828) describes the advanced society in the year 2126. Loudon’s work is remarkable in creating good history record reviving the theme of Egyptian mummified corpse.

2. Universe of Science Fiction

2.1 Scientific Romances [H.G. Wells and the Novel] 1866-1946

“My conviction is that Wells the novelist, not merely Wells the educator, or Wells the scientific romancer or Wells the prophet or Wells the educator, or Wells the anti-utopian utopian, or Wells the thinker or Wells the saviour will have his day. If it be not now, yet it will come”

(Robert Bloom, Anatomies of Egotism).

The modern age is essentially the age of the novels. In this era, the modern novel has travelled on diverse paths leading to different directions, witnessed the flowering of various tendencies in the novelists. We are confronted by different schools of fiction, different types of novels and different angles of approaching the problems of modern life. Closely allied with psychological trend in modern fiction is the tendency to employ science for purpose of romance. It has revealed to the modern novelist in numerable aspect of life and has opened new vistas of thoughts and imagination to be employed in fiction. Among the writers of twentieth century, the writer who employed scientific Romance in his novels was H.G. Wells. His novels may be divided into a) novels of character and humour b) fantastic and imaginative and c) discussion novels. His earliest novels are the fantastic romances in
which he has employed romantic liberalism along with science, may be described as scientific fiction. He is the immediate ancestors of the modern English novel who dominated the earlier part of the twentieth century. Among the writers of twentieth century Herbert George Wells was the great revolutionary, writer as well as visionary, exerted a tremendous influence on the minds of his contemporaries Wells wrote the bulk of his scientific romances in…

As a writer of scientific romances, Wells stands unrivalled. His scientific romances are;

- The Time Machine (1895)
- The War of the Worlds (1898)
- The Island of Dr. Moreau (1896)
- When the sleeper wakes (1899)
- The first Man in the Moon (1901) and
- The Food of the Gods (1904)

His very first romance, The Time Machine, deals with scientific subject in fantastic way. He conjures a world of future in the year 802,701 which is unheard of. A young scientist, to the amazement and disbelief of his colleagues, profound, the idea of time as the fourth dimension after length, width and depth was unheard of. He has perfected a machine that is capable of taking him into the past or into the future. It is his plan to take machine to travel through time.

Wells used the time travelling device to study biological conditions, and conjured vision which is woven around the earth’s organic future. His central interest was in Darwinism and the biological sciences and from them, he drew, the ‘Men of the Future’.

When the time traveller lands in the year 802,701 A.D. – one of the intermediate stages of the human future, he surveys the warm world of the
future. He observes a wide variety of organisms in their natural habitats. He observes rhododendron bushes, white marvel figures, birch tree, blue summer sky, huge buildings with tall columns, the strange flowers. He had a chance for a look at future society – Eloi, the gay, child like, a beautiful, graceful and insubstantial race who occupies the earth’s surface. On the second level he studies a peculiar human species, white and hairy underground monsters. The time traveller guessed that man had not remained one species but had branched into two unnatural divisions. This reminds us Darwin’s theory of speciation. Darwin observed that among the survivors, variations would accumulate over a period of time and make them different from their ancestors, or a distinct new species. This is what called ‘speciation’. The Elio and the Morlocks, represent future mankind, different from old generation. As romantic visionary, Wells makes acute observation of the human race. As John Batchelor the author of the chapter “Romances of the 1890s: The Time Machine, The Island of Dr. Moreau, The War of the World” in H. G. Wells states,

For Wells the most important of these ideas came from the advances in biology; Darwin’s writings and Huxley’s teaching had shown him that man’s life-span is infinitesimal in the context of geological time, that man is prey as well as hunter and that he may well be evolving downwards – back to the condition of apes- rather than upwards. (P.5)

Batchelor admits that wells vision of human race is grim. He has shown an extraordinary ability to look into future human race which has split into opposed species, especially the Marlocks represent ape like human species of the past.

The story of the Elois rather cold, because they represent dull, express leisure, and idleness. The time traveller, laments on state of their condition. In their society, the special roles of male and females had disappeared. The time traveller guessed that it was only in an age of physical force that men must be strong fighters.
He understood the whole secret behind their weak health. Hardship and freedom are essential for requiring strength and activity. Without hardship, mankind is slowly dying. There is no competition, no trade, but civilization had reached its peak. The future men were living in splendid buildings, beautifully clothed, no diseases or sickness, no struggle or hardships. Mankind became intelligent, educated and achieved zenith of comforts by science but man’s energy has burst out into weakness.

On the other hand, the Morlocks created bifurcated society, made Eloi as their prey. The mankind is degenerated into cannibals. The reader is disgusted to feel pity at the cannibalism of the Morlocks. The whole story can be read as tragedy of the ‘Fall of Man’. The opposition is rendered painful and ironic as well as unnatural in civilization itself; our own future, the very universe in which our descendents are found to be cannibals.

As he leaves the year 802701, Time traveller travels forward into a further future- the journey forward ends after thirty million years from now. He describes the course of human evolution. He finds that earth is dying. Humanity is totally declining. The earth is symbolically darkened by a solar eclipse. He describes the situation;

The darkness grew a pace; a cold wind began to blow in freshening gusts from the east, and the showering white flakes in the air increased in number. From the edge of the sea came a ripple and whisper. Beyond these lifeless sounds the world was silent? It would be hard to convey the stillness of it. All the sounds of man, the bleating of sheep, the cries of birds, the hum of insects, the stir that makes the background of our lives all that was over. (Time Machine P.105)

The evolution of human species is grim, then a whole new world is made open to the reader in the form of allegory. As Lovat Dickson the author of the chapter “First Frame” in His Turbulent Life and Times observes, “The delineation in ‘The Time Machine’ of the baser of our remote descendants preying cannibalistically upon one another, and further on in time, our familiar
world, with all human life gone, dying in a desolation of cold and darkness, had been spine-chilling” (P.66). Dickson points out that our remote future, yet is hundreds of centuries hence, in which the evolutionary process of human species is almost declining, present horrible picture, create fascinated interest not alarm.

In ‘The Time Machine the traveller is fundamentally lamenting on state of human condition. Men are puppets at the mercy of cosmic forces; Morlocks ground culture as they are blinded by brightness of the sun, remain underground beings, practice cannibalism. On the other hand, Eloi, flower culture, delightful creatures but are dying slowly. Totally, human species is extinct in near future.

A similar tension runs and animates in The Island of Dr. Moreau (1896); it is second major work of fiction after the time machine. H.G. Wells called the novel ‘an exercise in youthful blasphemy’ hence he enjoyed writing it. The text of the novel is narrated by Edward Prendick, a private gentleman, the sole survivor of collusion at sea, subsequently finds himself an unwelcome guest to the island home of Doctor Moreau, who creates human like beings from animals via vivisection. Edward Prendick, with a scientific education, eventually settles in and learns to accept his host’s work. The story has no allegorical quality like. The Time Machine rather adds satire direct on the nerves.

The book, which is vividly written in the documentary style, relates the story of Dr. Moreau resembles that of a madman’s zoological garden. Moreau, who has made a life-long study of physiology, wants to create a powerful new breed-half man and half beast. Moreau’s fiendish work of implanting human traits in animal forms seems worst. It appears to be mad doctor’s obsession. Though it creates the darkest side of mad doctor’s invention, yet Wells’ pessimistic theme is at its best seen with the sense of romance, excitement, satire, sarcasm conveyed by the writer in the creation of Dr. Moreau’s island of animals. Wells appears before the readers as philosopher, philosophising
science with ethical values. The novel has its message – science without Morality in seen. Here Dr. Moreau, the most notorious vivisector, is continuing his terrible experiments, and are wantonly cruel. An exceedingly intelligent man but lacks presence of mind and heart. By a process of vivisection he reshares animals into a low kind of man. The beast possessing their particular animal traits could not be a man. But it was Moreau’s surgical skill transformed Montgomery and Beast folk into humans. He ships animals to his island in order to vivisect them, working on their physical system as well as their minds. They are tragic figures of the novel. No doubt Moreau has created a powerful new breed of animal-half man and half beast. But his experiments are never a complete success. His humanised beasts gradually increase in number and became disgusting creatures driven by fear and pain, tormented by intolerable desires, the Beast Monsters fretted and constrained by rigid laws. Moreau’s attempt to educate them and maintain respect for law and decency is a continual struggle against traits and instincts Moreau’s experiments on Animals are crime against nature, because a complete transformation from animal to human is not science but has unavoidable side effect in the name of scientific experiments. Vivisected animals cum human beings at end appeared like misshapen monsters. Dr. Moreau’s started his experiments in England, but suddenly his career closed and was simply howled out of the country. The same man relishes the process and builds his own island of misshapen creatures. He has been on the island for eleven years and has created about hundred twenty Beast Men, a little more than sixty of which survive. These new or pseudo-animals recite a strange law that involves prohibitions against bestial behaviour and maintenance of manly instincts. But their terrible song suggests satirical tone of the story. Ironically, the beast nature is uncontrollable and is always dominant in them. Moreau explains that his life has been devoted to refine the skills of grafting; He thereby is able producing new breed to accomplish with his grafting. In his words, he explains;

It is a possible thing to transplant tissue from one part of an animal to another, or from one animal to another, to alter its chemical reactions
and methods of growth, to modify the articulations of its limbs, and indeed to change it in its most intimate structure\(^1\). His goal is to create a new superior race of human beings. He taught them to recite a strange litany called the law and praise for their creator.

“His is the House of pain”
“His is the Hand that makes”
“His is that Hand that wounds”
“His is the Hand that heals” (The Island of Dr. Moreau P.74)

As a result, the animals revere Moreau as their father but it does not work out longer time. But ironically, the beastly instincts revert to their original instincts violently and a great wild change follows around the island. The catastrophic change follows in the behaviour—Moreau has been killed by an animal maddened by pain. So the story employs the logic of science without ethics is sin. Dr. Moreau is a scientist without ethics, used science negatively. The readers close the book, with their anti-pathetic feelings to Dr. Moreau.

The most significant was his scientific romance, *The invisible man* (1897) as its hero was in fact blinded others but visible to himself. It was very popular in Bollywood film and brought rich funds to the creator. Like Dr. Moreau in *The island of Dr. Moreau*, *The invisible man* also invites another experimental investigator. Griffin, the invisible man, has like Moreau gained knowledge and perfected the principles of invisibility. He explains the principles of invisibility. It took his six years to perfect the techniques. It is a transformation in which new kind of life has been made possible by the principles of science. He took the drugs which were to make him invisible. He describes the first principles of invisibility.

Visibility depends on the action of the visible bodies on light. Either a body absorbs light or it reflects it or does all these things. If it neither reflects nor refracts nor absorbs light, it cannot of itself be visible. You see an opaque red box, for instance because the colour absorbs some of the light and reflects the rest, all the red part of the light, to you. If it did
not absorb any particular part of the light, but reflected it all, then it would be a shining white box. (*Invisible Man* Ch.XIX)

Here Wells’ technique is to put in just enough scientific detail to give the explanation a ring of authenticity. It is challenging modern science and research.

Griffin’s role of ‘experimental investigator’ places him in the company of Dr. Moreau who has lost all sense of ethical obligations. He runs the risk of making him appear a ludicrous figure rather than a frightening one. The man seems to be invisible but visible through activities connected to furniture, bedding and sleeping. The poor village people are totally confused and frightened by his activities. “If `e en’t there, “he said,” is close are. And what’s `e doin’ itout ‘is close, then? ‘Tas a most curious business” (*Invisible Man* Ch.VI)

Like Moreau, Griffin enjoys the power of science, he becomes a ruthless and in human corrupt whose goal is to achieve power and profit. Invisibility the mystery, the power, the freedom he wants then to serve him. The invisible Man thinks that he is going to achieve extraordinary power when he becomes a man wealth. In fact he is from humble background. Lack of money, prying professors, suspicion and prosecution from neighbours from landlords have made his life very difficult indeed. It was science which had freed the invisible man from the drapery and later he turned to a thief. Indeed, the later part of this book is a tragedy of a poor man wells outlines man’s destructive qualities in the novel – He turns to robbery, kidnapping and turned to a violent man to his own village. He plans to rob a large shop, decides to steal cloths, and has no regrets about theft or any scouples. He breaks a child’s leg and murders an old man. In the final scene of the novel, Griffin is attacked and savagely kicked like a mad dog. Like Moreau, Griffin has no sympathy for human beings, egotistical and unfeeling man. As an albino, Griffin blessed with invisibility, attempting to threaten innocent villagers and becomes a tyrannical maniac. As wells is offering good view of science, he had also shown negative use of science
without thought and purpose. The great fictions scientists like Dr. Moreau and Griffith meet their sad ends because of not understanding humanity, society and ethics. The strength of Mr. Wells his in the fact that he is not only a scientist but social thinker. He not only ingeniously describes scientific miracles but sets his romances in the midst of society, sketching with excellent characters and their attitude towards the machine and technology.

The war of the world (1898) is the most popular scientific romance of H.G. Wells and impressive book. Wells was great interested in ‘Intelligence on Mars’ and had discussed with his brother Frank.

He presents the intelligent beings on the Mars. They are Martians small, insect – like creatures but are powerful bug eyed monsters like an anthropologist, he studies the human race and its struggle for existence. The war of the world symbolically represents the war between two species – Man and Martians. As a student of biology, Wells detects life on the Mars. He finds their life on Mars is considerably advanced than on earth. They have developed over whelming war technology – they use Heat Ray, Huge Fighting Machines, heavy guns and great cranes. The human beings are naturally tensed for the fate of their existence under attack from extra terrestrial creatures.

It is an attempt to present an alien world and their war against species. In creating this situation wells is inventing imaginary war, panicky people, crowdly roads and destruction of London. Through fiction, the writer describes the flight of the English reform the monsters. The Martians use many forces and army forces. The inhabitants of London are evacuating city, the Martians go on with their terrible weapons wells descriptions of a purely imaginary battles are among the best he ever wrote. The battle indeed is a purely non-human vision that the book reaches its finest passage. The Martians invasion with human species does not last for long very soon it comes to an end. The narrator discovers that the Martians are all dead killed by the earthly bacteria. The theory of evolution had shown all life as a relentless struggle for existence. Men are quite as cruel as the Martians are. The simple fact that individuals vary
in genotype and phenotype are likely to be equipped in different ways to deal with challenges of nature. They defeated the Martians in their struggle for existence.

As a romance, ‘The First Man in the moon (1901)’ tells the story of a journey to the moon undertaken by the two protagonists, a businessman narrator, Mr. Bedford, and an eccentric scientist Mr. Cavor. The idea of describing an imaginary journey to the moon is good as the science here. The theme had been attempted by many writers before H.G. Wells. In the seventeenth Century the idea of moon voyages became so popular but they were works of fantasy than science fiction. The mode of transport also sometimes not machine but hero travels with the aid of birds or imaginary methods to reach the Moon. What is new and special in Well’s story is the journey to the moon is written in pure science, and anticipates many of the logistic of the space voyage. As David C Smith has observed in his *H.G. Wells desperately Mortal a Biography*:

One of the reasons it is the best of wells work based on science is that all the scientific aspects – gravity on the moon, the impact of the sun on the moon’s surface and even what that surface might be like – were vetted by Richard Gregory. Who called on leading experts in astronomy, astronomical physics, and other disciplines to ensure that the book was accurate, within the bounds of knowledge and theory of that time? (P.67)

Smith admits that the book was well written based on scientific accuracy and acquired permanent place in cosmic travel stories. As a character Cavor is well drawn and convincing individual. He develops a new mode of transport cavorite that can negate the force of gravity. He is devoted to his work. He is prepared to sacrifice himself for the cause of his experiments in science Wells shows him as an ideal scientist with proper scientific training. His pursuit of science never ends until he stays in Selenties society. This companion Bedford returns to earth without cavor. Cavor was a practical chap, interested in
invention, research, the advancement of the human race. As a scientist he was truly cared for his profession, wanted to improve the people and raise economy of his nation. He recorded accurately alien society, in truth; there are very few scientific men like Cavor. He was fully conditioned by lunar society. His features become hidden beneath the huge, bulbous contours of his brain. His voice is used for stating of mathematical formulas. He could not feel, no human emotions, no worries in him. His life was rigid and fully controlled by the alien society.

The function of Scientific Romances

The science romance was a genre created by H.G. Wells. Among the writers of twentieth Century Herbert George wells was the greatest revolutionary and established his reputation in 1890s as a writer of scientific romances. He was the first English novelist who has a pre-dominantly scientific training. He won a scholarship to the Royal College of Science where he studied biology. His central interest was in Darwinism and biological sciences, from which he opened new vistas of thought and imagination to be employed in fiction. Therefore is earliest efforts in fiction were a series of scientific romances. This constitutes the first stage in his career as a novelist. These romances are extremely ingenious in their mingling of fiction and science.

The science romance requires a different technique from that of other novels. It requires strange incidents, fantastic events, strange phenomena rather than emotional characters essential in other types of novels. Wells possessed excellent imagination to recount fantastic events at its highest point – his gift of being able to picture strange fancies are the basis of the science – romances. As Norman Nicholson the author of the chapter “The Scientific Romances” in H.G. Wells observes, “He is taking a score of botanical memories combining them, inverting them, varying them, and building them up into a Cadenza of shining visual beauty”(P.24). Nicolson admits that wells imagination is superb, haunting the incidents from his memories, he develops fantastic theme and telling us in most amazing way.
Wells a novelist of future his scientific romances build the picture of future. He was chiefly influenced by the work of Charles Darwin Wells was also trained and influenced T.H. Huxley, the clef interpreter of Darwin’s science. From them he drew a poetic and symbolic intensity of vision which forms the true characteristic feature of the best science fiction writer. The two disciplines, geology and biology had been wells major studies at the Royal College. He learnt to find a true solution to the questions of life. He drew on two main areas of scientific knowledge in scientific Romances. The first is biology the second is astronomy. In his early scientific romances wells builds a future society and future men. He appears her is not a comic writer but a visionary and prophet on the surface these novels contain plenty of fantastic incidents, but at the same time we are made aware of Fall of Man in the ‘Struggle for existence’. His romances are the works of his predictions. He tried to predict the social and technological developments of the twentieth Century. As a writer of scientific romances, H.G. Wells stands unrivalled in these romances he has shown an extraordinary ability to look into the future and many of his predictions have proves to be true.

The real source of well’s success was not necessarily in his incisive science romance but more likely in his application of real science and in his resonance with the controversy concerning the possibilities and limits of science. In his scientific romances, the science will not disturb an up-to-date reader. Yet none of the impossibilities hampers a reader’s enjoyment. As David C Smith the author of the chapter “Fiction About The future” in H.G. Wells: Desperately Mortal: A Biography observes:

Ultimately Well’s contribution to fiction writing was to apply real science, and the questions and techniques of science, rather than the pseudo-science of his competitors here his relation ship with Richard Gregory and the other ‘men of science’ as they called themselves was crucial, for they monitored his science before it went to the printer and publisher.
Smith admits that wells never applied pseudo-science but imagined the possibility of things under the influence of science.

2.2 Extraordinary voyages

Jules Verne (1828–1905) the last happy expeditionist, of ‘Voyage extraordinaries’. The fantastic journey and the Utopian story developed through vivid descriptions, detailed explanations and the eyewitness accounts with the publication of his ‘extraordinary voyages’. He has been consistently praised for his ‘extraordinary voyage’ or (extraordinary journeys), are a sequence of fifty-four novels originally published between 1863 and 1905. He signed a contract in which he was to produce two books a year for twenty years or alternatively forty books in a shorter period of time. The works in this series included his famous expeditions, are, Journey to the Centre the Earth, Twenty thousand Leagues under the Sea, Around the world in Eighty Days and From the Earth to the Moon. etc. Hetzel a progressive publisher and his mentor was glad to discover a new talent like Verne and gave his valuable suggestions and comments on his novels. “The very goal of Verne’s ‘voyages extra ordinaries’ as outlined by his publisher Hetzel to outline all the geographical, geological, physical and astronomical knowledge amassed by modern science and to recount, in an entertaining and picturesque format- the history of the Universe” (Quoted by Arthur B. Evans in Literary Intertexts in Jules Verne’s voyages Extraordinaries http://jv.gilead.org.il/evans/literary.html).

Verne was a man of extraordinary talents. Endowed with lively imagination, and adventurous character, he changed the very face of Science fiction. Science for Verne is not set in far future but is hidden mystery in present. He went in search of extra ordinary voyage in this familiar Universe.

The first pure science fiction of his writing is Journey to the Centre of the Earth (1864). This is a brilliant piece of writing that Verne ever wrote. It is an unparalleled prehistorically record. It plunges the reader beneath the sea, where the characters experiencing various adventures. The story involves German professor Otto Lidenbrock and his nephew Axel along with their
guide. Hence descend into the Icelandic volcano Snaefells. The explorers travel down through the geological layers; later discover a subterranean sea in which they encountered strong creatures. They seem some dead and some very much alive. They attempted to cross this sea by a raft; they witnessed a fight between animals. Verne wrote from the Earth to The Moon and Round the Moon in 1865. The story is actually written in two parts ‘From Earth to the Moon’ and ‘Around the Moon’. Around the Moon was written five years later and the sequel to first book. It tells the story of the Baltimore Gun club and its President Impey Barbicane’s plan to take a rocket ship to the Moon. He proposes the Gun club to send a projectile to the Moon. He pokes all necessary preparations to build an enormous sky facing Columbiad space gun and launch three people. The president wants to achieve glory so the Gun club is busy in its preparations, through mathematical Science, geology and astronomy data on the subject. There is continuous announcements and Gun club in news for the plan of a journey to the Moon. Compared to other Moon voyages of the past Verne’s story proposes to establish the first contact between the moon by sending a projectile which is too practical in its operation and reality today. The story is notable for its rough calculations for preparation for the Cannon & collecting data’s on the subject. The enterprise is well known and the people are very curious about the new task. President Barbicane and his committee members worked on seriously to launch the projectile to the moon. Their hypothetic project is notable for launching the projectile to the moon. The three passengers, the Gun club’s president, French man Michel Ardan and captain Nicholl are ready for the launching. After deciding the place for the launch – stone’s Hill in ‘Tampa Town Florida, they raised money for experiment, Verne gives the exact position to Columbiad cannon which is made in the nick of time. At first Gun club planned to send only an object, but a surprise waits when a French man Michael Ardan wishes to man the bullet. Finally all three plan to travel abroad the projectile. Ardan is shown as little bit in sane but brave does not care for his life. He wishes to travel in the space. The character of Michel Ardan, is impressive, he is a man of feelings, concern for end goal in
the story. He solves the problems and ends hostilities between captain Nicholl and Barbicane. Due to these efforts, both are reconciled on all occasions. Otherwise, the novel depicts misunderstandings, quarrels and their duels with pistols when Ardan stops them.

Ardan was the most memorable character, launched to the moon. As Patrick Moore the author of the chapter “The Genius of Verne” in Science and Fiction has pointed out “He was the first of science fiction’s true space-heroes and his attitude was summed upon his reply to a question as to how he would return from the Moon once he had reached it. He said, simply. “I shall not come back” (P.53). Moore admits that Ardan is a true sacrificing character, does not care for his life that he will most likely die on the Moon.

In the end, the projectile is successfully launched. The first book, deals mainly with the firing of the Columbia and the projectile manned by Ardan, Barbicane and Nicholl. One of the greatest merits of the story is its astronomy, rough calculations, requirements for the cannon and final launching to the Moon. Some of his figures are close to reality. As Fresh-man seminar, FRS 148(QR) reports “The dream that Jules Verne portrayed in 1865 became reality a century later when project Apollo landed men on the moon and returned them safely to earth” (http://www.princeton.edu/~stengel/FRS.html)

The entire story is notable for its detailed discussions of how large the cannon and projectile would be needed and what sort of materials be used for. The president, the pioneer of the project announces the plan of a journey to the moon, sent letters, offering suggestions to help in the endeavor. Lots of statistics, physics, astronomy and algebra are employed. He seems prophetic in his observations. His conclusions so foregone that the scientists and engineers would follow the space program as portrayed in Verne’s moon voyage and end up with what are essentially the same results.

Round the Moon the sequel to Verne’s first book, deals with what happens to the three men in their travel from the earth to the moon. Verne gives us a description of lunar geography. His account of moon’s atmosphere, and
also its gravity are more interesting. The three passengers conclude that there is no life on the moon, whereas previous moon voyages fantastically picturise life on the moon. The science in Verne’s story is pure. Actually the asteroid played an important part in the story. The two books established their reputation as extra ordinary cosmic travels and true science stories till today. His next novel *Twenty Thousand Leagues Under the Sea* (1870) predicts the concept of the sub-marine and is generally regarded as his masterpiece. Verne creates the sea life, fully against the facts of contemporary marine science, that would give the thrill of the fantastic and then he uses much of the rest of the book to make this exciting adventures plausible.

*Twenty thousand Leagues under the Sea* is the first person narrative of Pierre Aronnax, a renowned scientist and a man of science. The story deals with people sing about mysterious creature that has caused ravages in the sea. Public thought that a mysterious creature had been sinking ships. Public forced the governments of the world to get rid of the man and to take some positive action against the invisible mystery. Professor Arronax, accepted the challenge and ventured to solve the problem, joined the American frigate Abraham Lincoln in the pursuit of mysterious unknown and invisible menace. Captain Farragu is a good sailor, led by his faith that the monster exists. He is certain that he will find the monster. When everybody in the novel is talking about this monster but the protagonist Arronax a man of natural sciences discards certain superstitious imaginings. He is a man of science and reason thinks everything scientifically. He says,

“I believe in the existence of a mammal powerfully organised, belonging to the branch of vertebrate, like the whales, the cachalots, or the dolphins, and furnished with a horn of defense of great penetrating power” *(20,00 Leagues Under the Sea P.18)*.

Aronnax tries to persuade Ned land with statistics and gives a lengthy discussion of possible explanations. Verne highlights the character of Aronnax, consumed by facts and makes obscure references to science. The opening
chapters illuminate man of science Aronnax’s personality; he is inclined to believe science rather than popular imaginings. Verne was creating the fiction, fully against the background of astounding adventures of protagonist and antagonist of a story. Aronnax and his comically faithful servant Conseil and a practical minded Canadian harpooner named Ned Land went into water in search of adventure finally they landed upon the creature. But their surprise, it seemed was a submarine. They were rescued by captain Nemo - a man of scientific knowledge of the sea is far greater than Aronnax.

3. Modern Age

3.1 The Early Twentieth Century: Dawn of the Magazines.

The Twentieth Century is perhaps the period when SF became more popular than earlier era because of amazing stories appeared on the new-stands in America. Earlier in the century the book publication had been expensive, few individuals could afford to buy these books. Science fiction readers were doubtless delighted when an amazing experiment had been undertaken after gap of years. Pulp magazines and Dime novels began to feature SF stories which are cheap. From 1926 until the early 1950s. American science fiction magazines were the main sources of written science fiction. In Britain, for instance created a market for a rapidly expanding number of popular magazines and book titles. There was no such thing as ‘British Science fiction. The British writings appeared in American magazines “Although novels like Mary Shelley’s Frankenstein and Jules Verne’s 20,000Leagues under the sea are today seen as science fiction classes science fiction did not exist as a recognized genre, until 1926, when it was christened ‘scientifiction’ by Hugo Gernsback in his magazine Amazing stories”


Through the 1920s and 1930s and even, to an extent, into the 1940s and 1950s scores of magazines and some novels helped to popularize the emerging genre and provided variety of planet stories or serials of high adventure space
stories that would later develop into both a readership and ultimately, a good
source of new authors. However, the credit of founding of Amazing stories
magazine in 1926 goes to Hugo Gernsback (August 16, 1884 - August 19,
1967). As Wikipedia quotes, “His contributions to the genre as publisher were
so significant that along with the novelists H.G. Wells and Jules Verne, he is
one person sometimes called ‘The Father of Science Fiction”
(http://en.wikipedia.org/wiki/hugo_gernsback.html). In his honor, the annual science
fiction Achievement awards are named the “Hugos”
(http://en.wikipedia.org/wiki/hugo_gernsback.html). Hugo Gernback also coined the word
scientifiction. His contributions to the dawn of magazine was significant that
he did grounding work as an editor. Gernback himself said,---“ the concept
of Amazing Stories in 1926 was not a haphazard undertaking. Its groundwork
had been well prepared for 15 years!” (Quoted by Ashley Michael the editor of
The History of Science Fiction Magazine P.11)

From 1926 until the early 1950, American Science fiction magazines
were the main sources of science fiction stories. In the world of pulps genre,
the heyday of the pulp magazines was between 1920 and 1940. When there
were usually hundreds of titles available. “The Pulps”, so called because, they
were printed on cheap, highly acidic paper, grew out of the dime novel industry
of the nineteenth century, cheap, portable, disposable and usually sensational in
presentation and content, pulps can be considered predecessors to today’s
paperback books” (http://rs5.loc.gov/ammem/awhhtml/adsere2/pulp_fiction.html).

In the world of pulps genre, Authentic science fiction, British Science
fiction magazine, Weird Tales, Amazing stories, Astounding stories, Wonder
stories, planet stories, Fantastic Adventures, Uncanny Tales, provide the
sensational images of woman on their covers that created a market for sales.
They have long been considered the popular entertaining female images that
appeared exclusively to male interests. Most pulp science fiction covers were
designed bearing full of tough men. However, these tough men attracted
towards women on their way to alien planets. The covers generally evoked
ideas of women are objects to be loved, rescued or dragged out, appealing to male and female readers by their thrilling love and enticing roles. The women are attractive with scantily clad, Large-breasted, attracted towards adventurous heroes. The heroes are obsessed by love to earthly women. There were some women fight by the sides of their men against the or assault of some form of alien culture. The protagonists who acted out the leading roles in those scenarios of the pulps were male along with women as companions. However the classic image of pulp science fiction is extremely fashionable by women characters, who are beautiful, Romantic, Vivacious, good companion and sometime adventurous enough to accompany male protagonist without much thought to alien planets. As Robin Roberts in his “The Female Alien: Pulp Science Fiction’s Legacy to Feminists” quotes, “Surprisingly, pulp Science fiction does contain the seeds of the contemporary feminist subversion of the genre, surveying illustrations, especially cover art and cover stories of pulp sf in the late nineteen forties and early fifties, reveals many strong female characters, characters with potentially feminist qualities”(P.33). Robin rightly states that between 1940 and early 1950, women on the covers were picturized dignified, modest, fully clothed appeared to be the changed roles of women. Some women achieved in the literary field too. They wrote romantic stories by hiding their gender. Few women artists like Margaret Brundage; Sue McEven created marvelous literary paintings in the stories.

When Amazing stories had experienced financial problems during the early, 1930s, a new magazine named Astounding stories came into existence, John w. Campbell, took over as chief editor. The period of Campbell’s editorship between the late 1930s and late 1940s brought significant changes, it was arguably the most important period in SF magazine history and is often referred to as ‘the golden age of Astounding or even the ‘Golden Age of Science fiction’. Perhaps Campbell nurtured the careers of a number of talented writers like Robert A Heinlein, Arthur C. Clarke, Alfred Bester, Fritz Leiber. Theodore sturgeon A.E. Van Vogt, ISAAC Asinov who contributed science fiction stories of greater maturity and depth.
3.2 Anti-Machinists

The 1930s and 1940s also saw a number of mainstream authors such as Aldous Huxley in Brave New world (1932) and George Orwell in Nineteen Eighty-four (1949), Karl Capek in R.U.R., particularly make use of anti-machine morality and concepts. They are machine-bashers, who employed satiric fantasy to caution man against the dangers of an excessive involvement and belief in scientific progress. They advocate against material prosperity and bodily pleasure at the cost of spiritual and moral values.

Aldous Huxley (1894)- Huxley, the grandson of the eminent biologist, as credited with having written books on science fiction. Huxely’s two novels Brave new World (1932) and Ape and Essence (1949) both intended as warnings of the possible consequences of misapplied science on human lives. In Brave new World, Hurley created a new world which is full of satiric fantasy. It is called negative utopia or dystopia. Huxley imagines contemporary research trends and modern ways of life. In this world to come, there is denial of the organic, natural world- no family life, no love and affection among family members. The human production is a factory production; here the birth of an infant occurs not through natural pregnancy. Brave new worlders are grown in the laboratories, decanted, graded and conditioned. It is a controlled society; individual passions such as love, affection, compassion have been replaced by communal spirit. The life is gradually mechanized and standardized; the bodies are hatched, bottled and decanted. In this world the process of mars production of babies is formulated. Normally, one egg produces are embryo which is grown into one adult. But Bokanovsky process makes it possible for a single egg into ninety six buds.

Being a futuristic fantasy, ‘Brave New world’ does not offer much scope for charactersation. The opening section of novel comprises the description of a grey 34 storey building i.e. the Central London Hatching and Conditioning centre strengthens the concept of decanted babies. Huxely says that in this world, the babies are conditioned seems the infantile stage eight months. They
are conditioned since through the noises of explosions and electric shocks; the sleep teaching process by which infants acquire and their natural instincts are curbed. They are conditioned to hate books and flowers because of the economic policy of the world state.

Huxley’s idea of decanted baby which is conceivable come true to now. As Bhaskara K. Ramamurthy the author of the chapter “Reason and Rhythm” in *Aldous Huxley: A Study of his Novels* observes, “Recently prof. James Bonner of the California Institute of Technology, told a seminar of Science writers that it would be possible, in not too distant a future, to produce a master race of super-babies – ‘clones’ he calls them – by growing them in the laboratories” (P.91).

Huxley has drawn a world in which ray of human happiness in the character of John, the Savage who acts as a bridge between the two cultures. He is romantic, loves mother, quotes Shakespeare and believes in God. He seems to favour the life of village, far away from the so called brave new world. He ridicules scientific new world and loves the old of World of primitive impulses and emotions. Huxley seems to have introduced him for violating decayed society of Brave new world. Here how little is man in the universe. He will decay into machine, the richness and variety of human personality traits, natural instincts will destroy and the paradox of human civilization reduced into an automation. A modern dictator armed with misapplied biology runs social norms. The students watch here sexual games. Such games are permitted in order that they may get release from emotional tensions. The use of the universal drug some to release the mixed from mental tension and physical fatigue is common here. At one extreme is science without Rhythm leading to anarchy. At the other is the brave new world of scientific efficiency in which the techniques of incubation, growing super babies, constitute the basis of scientific discovery. We have also of new-Pavlovian infant-conditioning methods, the sleep teaching process which help to improvise the medical treatments once again for small children. The satire
here is fully anti-human, anti-social attitude is caricatured in the typical citizen of Mond’s world, who controls world by science. His world controlled methods, beliefs, arguments and explanations, are more vivid and frightening. Hurley shows what Mustapha Mond can do mankind o the wrong direction of misapplied science.


The suppression of machinery is a familiar theme in the science fiction anti-Utopias of the past fifty years. The machines and technologies so often celebrated and even criticized in dystopian novels technology and the applied imagined future society along with scientific lines held responsible for creating a hell for man. There is no wonder that machine age materialism has inspired dystopian vision of the technological tendencies of the age.

R.U.R was written in 1920 by Czeck writer Karel Capek. It was writer’s brother Joseph contributed the appropriate world for creature made out of non-organic materials. It was through Karel’s stage play R.U.R (Rosumovi Umeli Roboti) (Rossum’s Artificial Robots usually translated into English as Rosumovi Umeli Robots gave us fascinating name in Modern science fiction. The history of the play is very interesting and creates amazement. As Adam Ronerts, the author of the chapter. “The Early twentieth century: high modernist science fiction” in The History of science fiction quotes:

The drama is set in a factory located on an island in the south pacific which is manufacturing synthetic humanoids. This is the place where the world ‘robot’ was coined (robota is Czech for ‘drudgery’ or ‘servitude’) although capek’s robots are not metallic but fleshy. Similarly the company title ‘Rossum is a play on the Czech world rozum, which means ‘reason’ or intellect. (P. 119)

After the end of World War I, many changes that entered into the arena of socio-economic life of the people due to technological development. Technology was allowing faster automobiles, new highways, airplanes and made the world smaller. Consequently, the technology offered the promise of
rosy life and also held responsible for creating a hell for man. The hell is really a product of human evil desires. It exposed the darker spots in human nature. As the individual perfected machine he tortured human nature too. Thus Capek’s work R.U.R rendered the feeling of oppression, a new level of tension created in the state of man. When capek began writing R.U.R the society discovered the exploitation caused by the machine. As John clute, the author of chapter, “Major Authors” in the illustrated encyclopaedia observes, “R.U.R is a play of exorbitant wit and almost demonic energy, presenting an apocalypse that the human cast cannot comprehend” (P. 119). Clute admits that R.U.R presents demonic power of the machine, a sad, disillusioned new modern life under the influence of machine.

Capek’s story indicates the world of Robots, created for industrial purposes in order to free humanity from the burden and laborious life. They are treated as industrial slaves. “In its original Czech, robota means forced labour of the kind that serfs had to perform on their master’s lands, and is derived from rab, meaning” “slave”. (http://en.wikipedia.org/wiki/R.U.R) They seem rich gift of science marvels and happy to work for humans. The man is fully contended because these creatures become ideal assistants in the field of industry and drudgery of labour. But Carel Kapek’s play ends with a horror note because hostile robot rebellion leads to the extinction of the human race.

George Orwell’s Dystopian vision in Nineteen Eighty Four

It is orwell’s last novel, and has been classified as an anti-utopia. Orwell wisely forwarned that the logic of science and authoritarianism null enslave man. Although science and technology are the principal sources of the material welfare of modern civilization, the increasing mechanisation of the society can find no place for humanistic heritage. Orwell sets out to write a horrific vision of possible future where a man may use machinery in order to condition his own life. The future is dark, the scientifically run community conditions man’s own life. It is the metaphysical ghost of evil.

66
The actual setting of Nineteen Eighty-Four is 1948 – the year in which it was written, but not 1984. His world of 1984 is the war time world of 1944. Everyone by 1984 is to be a spy and a betrayer. Nineteen Eighty Four is a picture of totalitarian government whose sole object is the maintenance of its absolute power by every device of modern technology. In the opening Chapter of the novel, we are acquainted with all the apparatus and principles of the authoritarian or totalitarian state.

The citizens are spied on by telescreens, everybody and anybody could be watched and heard. The atmosphere of fear which the state Oceania has already been built up in the minds of citizens. The spying was effectively carried on by the Thought police. Nineteen Eighty Four, in this connection is an impressive book to set out to write a cautionary tale to convince of the terrible results of science. The INGSOC PARTY and its boss BIG BROTHER created the atmosphere of fear in the minds by means of which the thought police can see and listen to every citizen at any time, day or night, a telescreen which receives and transmits simultaneously is filled into the residence of every member of the party. The telescreen can be dimmed but not turned off so that there is no way of telling when the thought police have plugged in any individual wire. The horror of all this technology is conveyed to us through the experience of the novel’s hero, Winston Smith. Winston Smith was dehumanised into “soulless automations”. He is lost in his loneliness. He is under constant observation by the Thought police. His existence is imperilled. He longs for privacy but the party curtails his freedom. Winston has constant longing for the past which the party holds in contempt. His action in starting a diary is against the party code which does not permit any kind of secrecy or privacy. Winston’s attitude towards sex is also opposed to the party’s code. He recalls his experience with prostitute. Love affairs between party members are strictly forbidden. Marriages are permitted but party expects married couples to have sexual relations, only for the purpose of begetting children for the service of the party. In this way technology with totalitarian government employed to mislead and paralyse the public mind in a country like Oceania.
The people suffer because of the over-abundance of machinery, but they themselves lack real depth of thought. We find persons like Winston is feeling uneasy and uncomfortable because of the suffocating conditions in which he has to live. George Orwell gives evidence of an acute psychological insight in revealing to us the working of Winston’s mind and tracing his thoughts and feelings. *Nineteen Eighty Four* like Aldous Huxley’s Brave New World contains a satiric vision of future. Man has already become a slave to science and much of his life depends on the facilities provided by it. The new inventions we meet in the novel are telescreen and the helicopter that used to describe a society in which a machinery of indoctrinated ideology. The society of this novel is machine fed on ideology. The telescreens in modern days are used in big shops and cyber-cities. Orwell imagined it for controlling man’s life, that is put to the service of the cruellest political Maina as was proved in Hitler’s Germany. The autocracies of the past demanded apparatus of technology only for passive obedience. Most bureaucrats threaten the innocent minds. Orwell attacks machinery tendencies of cruel political mania. The politics of the party along with the entire machinery of the totalitarian state of Oceania gives frightening picture of the environment.

**Science and politics** – Governments were caught in a cleft stick due to wars in the modern age. So keep up parity of power with its neighbours, each sovereign state had to go for the latest or moments in increasingly larger amounts. Thus the wonderful developments in technology make wars more frequently probable. As a result the world has fallen apart into two or three parts, each holding the atomic bomb. Technology has given so much power to each nation that the individual man has dehumanised into a servile robot. Those who in power delight in exploiting mankind on the wrong direction and take immense pleasure in victimising them. This is exactly the world of Nineteen Eighty Four.

The party has two major problems; the conquest of the earth, and the prevention of independent thought; and science exists only in so far as it helps
to achieve these. The world against which Orwell warns us is the world which is supposed to have emerged after the atomic war of 1950.

George Orwell is against imperialism and wants to root out totalitarianism. Applied science is a potential means for infinite evil as for infinite good. Orwell’s dystopian fiction suggests that there is something rotten in the state of aristocracy which does not permit its citizen’s to live freely. The triumph of the machine suggested that the technological development could come in the way of progressive industrialisation resulting in the abolition of disease and misery in mankind. There by a new kind of life has been made possible by a scientific discovery. It is significant that the most optimistic Utopias were written during the years before the First World War. It was during this period the possibility of making this world a happier place by technological transformation. But this dream turned bitter in this century. Science, when it was put to evil uses, and in effect to destroy the whole habit of empirical thinking – the results are disastrous. Nineteen Eight Four in this connection is cautionary tale to convince of the terrible results of science.

3.3 The Golden age of Science fiction

Historians of science fiction often speak of the years 1939 – 1942 as “the golden age”. It marked the publication of works of well known classic Writers; Robert A Heinlien, Isasc Asimov, Theodore Sturgeon, A.E. Van Vogt, Jack Williamson, Clifort D. Simark and many more. One leading influence on the emergence of an extraordinary array of brilliant new writers was John W. Campbell who became legendary in the history of science fiction magazine as an editor and publisher of many science fiction magazine, under Campbell’s editorship, old edition of Astounding stories renamed as Astounding Science Fiction in 1938. Campbell wanted fiction that seriously injected higher writing standards of the future of Science and technology. Suggesting Campbell’s method of editorial skills, Theodore sturgeon, the renowned writer recounts; “The editor would challenge his writers with assignments such as: “write me a story about a man who will die in twenty-four hours unless he can answer this
question: ‘How do you know you’re Sane’? or ‘Write me a story about a
creature that thinks as well as a man but not like a man’(Quoted by Brooks
Landon in Science Fiction After 1900 P.55). Theodore sturgeon opined that
Campbell’s editorship challenged the talented writers who produced books of
worthy mention and which was in fact, the signal for the opening of a new
phase.

The Golden Age Science fiction saw the development of scientific
achievement and many of the key concepts of SF. Every history of SF tells the
golden Age story, that would later come to define the field. The authors took
ideas from the pages of proto-science fiction, turning them into true scientific
of wonder. Science of wonder is celebrated in many of the stories as authors
developed scientific themes or content. Indeed, some of these writers were
Engineers, Doctors in their professional carriers.

During the years from 1939 to 1943 Astounding Science Fiction is
overwhelmed by the wonderful short stories and revelation of the vastness of
the universe through serialisations ever to be written Asimov’s Robot and
Foundation sequences, Robert Heinlein’s 1950s novels such as The Puppet
Masters, & Van Vogt’s Slan.

Under Campbell’s guidance, Science fiction stories in Astounding were
to devote much more attention to Future, something new and even more
exciting. Science became an integral part of many of the stories. At the same,
Campbell wanted plausible science fiction that satisfies the needs of the future,
matching the sociology and psychology of the future, He shaped the so called
Astounding stories. Summing up his view of the way Campbell freed SF from
its limiting pulp traditions, Isaac Asimov has written:

What, specifically, did Campbell do? First and foremost, he de-
emphasized the nonhuman and non-social in science fiction, Science
fiction became more than a personal battle between an all good hero and
an all bad villain. The mad scientists, the irascible old scientist, the
beautiful daughter of the scientist, the cardboard menace from alien

70
worlds, robot who is a Frankenstein monster— all were discarded. In their place, Campbell wanted businessmen, space ship crewmen, young engineers, housewives, robots that were logical machines. (Quoted by Brooks Landon in *Science Fiction After 1900* P.57)

Isaac Asimov opined that Gernsback founded science fiction technically where as Campbell made it social science fiction, built a bridge between society and human approach. As a phenomenon that affected the general public and became a powerful social force.

Campbell’s ‘creation’ of Golden Age science fiction was accomplished through his partnership with established writers such as ISAAC ASIMOV, Robert Anson Heinlein, Campbellian vision well achieved through good works from these authors.

**ISAAC Asimov’s fantastic Robots –**

ISAAC Asimov [1920 – 1990] was a prolific writer, best known for his works of science fiction. Along with Robert A Heinlein and Author C Clarke, he was considered one of the “Big Giants” of Golden Age Science fiction writers. Twentieth century SF abounds with Robotic stories, some of the best known of which were written by Asimov. His most famous work is Foundation Series, other major series are the Galactic Empire series and the Robot series. The Robot series is a series of short stories and novels, featuring talented robots. The first four robot novels *The caves of steel* (1953), *The Naked Sun* (1955), *The Robots of Down* (1983) ,*Robots and Empire* (1985) focus on mysterious powers of machines.

ISAAC Asimov has been one of the most significant and prolific writers in the area of robotics, who offers intriguing insights into robot thought processes. His three Laws of Robotics establishes genuine relationship between man and machine. In this regard, he is well accomplished the vision of Campbell the chief mentor who always wants socially significant science story. Before Asimov, Frankenstein and kapler’s R.U.R depict robots as mere metallic monstrous lifeless inhuman metals. But Asimov states in *The Rest of
the Robots, “They are built into the positronic patterns of the brain and must be observed. The First Law the prime rule of robotic existence, safeguards the life and well being of all humans” (P.180). Asimovian laws are turned as a new attitude towards machine, now seen as an instrument for the progress of mankind and development of technology aided society. Asimov’s robot hopefully and tactfully embodies the values of science in its ethics in The Caves of Steel (1954). Its theme was a perfect mysterious. It describes contemporary city life where the robots replace man power and are performing certain duties. When an eminent spacer scientist has been murdered on earth the earth detective Bailey, assisted by a spacer robot starts investigations. Spacer robot R. Daneel Olivaw exactly constructed like his maker Dr. Roj Nemennuh Sorton found to be more efficient than manpower. Lije Bailey naturally suffers from prejudice against his assistant and even accuses him of the crime, such an accusation is against the rules of First Law, i.e. A robot may not harm a human being.

Robert A Heinlein – [July 7, 1907 – May 8, 1988] – Robert Heinlein was one of the most influential author, explored the politics of engineer. Trained as an engineer, he set a new standard for engineer paradigm in his works. Heinlein was also like his engineer mentor Campbell popularised social science fiction and technology.

3.4 Cosy Catastrophe

Cosy Catastrophe focuses on a disaster management where a hero takes advantage of the situation, triumphs over Catastrophe and rebuilds society. The 1950s was a time of disaster, damage and population came to terms with their loss of property, and losing of loved ones. SF of this era in Britain featured disaster and devastated by ecological imbalance the results in drought, famine, and everyone is crying of disease- the atmosphere menaced by poisonous plants. Everywhere suffering people separated families, unsettled lives, aliens conspiring with the political elite all owe to Catastrophes. During this period no one wanted to read about heroic stories of super science world or ambitious
space explorations. Instead of superheroes, there came heroes of middle class who attempt to find themselves to way for survival in normal conditions. The situation was not as normal or clear-cut. The ruined futures of British Science Fiction well revealed in the works of John Wyndham (1903 – 1969), Arthur C. Clarke and John Christopher.

John Wyndham produced best selling disaster novels and rightly be called as master of the Cosy Catastrophe. His work – *The Day of the Triffids* (1951) chillingly anticipates destruction of mankind through blindness, Triffids carnivorous large plants have a poisonous sting. They seem to have come about as the result of genetic experimentation. The novel opens with a scene set in a hospital where Mr. Bill Masen a triffidologist recovering in hospital after triffid strike. He finds that everyone is apparently blind after watching the green flashes from comet ‘debris’ last night. People who observed the flashes permanently blind within a few hours. Within about a week of the comet, a mysterious plague also hit towns and cities across the world. The symptoms are highly agonizing which caused high pains in the bowels and high temperature in people. Bill describes ailing people who are found on the streets of London; helplessly are controlled by a sighted person. But Wyndham’s hero Bill Masen succeeds in facing the worst situation. Bill and others take steps to protect themselves against the triffids which are increasing in numbers. He marries Josella and she and Bill have good times later, they retreat to a secure area – the Isle of weight. Here Bill is trying to defend himself and his family from the triffid menace. There is no room for protecting the whole world from the triffid. He only wants to triumph over disaster situation or make alternations for survival.

Wyndham’s ‘Cosy Catastrophe’ produced middle-class life and its agencies in more profound way. His work constitutes an echo-box of disaster fiction. Catastrophes are well addressed through the sufferings of individual survivors. Masen admits his tortured position while he temporarily blinded by a triffid strike. It is clear that the natural force in triffids is female sexuality
which is fearfully advocated. Josella instructs Bill, “Every man who marries a sighted girl must take on two blind girls as well (wyndham 1954;124). Bill is shocked but in the interest of procreative survival accepts what Josella says.”(Quoted by David Ketterer, the author of the chapter “John Wyndham: The Facts of Life Sextet” P.381) The author created post-Apocalyptic vision that gave rise to darker side of life. He faithfully presented the effects of the Second World War. “As Andy Sawyer noted The Penguin imprint distanced Wyndham from the taint of American SF and the focalization of the novels was the studiedly middle-class experience of enduring Catastrophe (something repeated by John Christopher)”(P.130 Quoted by Roger Luckhurst in Science Fiction). Andy Sawyer admits that Wyndham disaster notes mirror middle class life, aims at a market of the middle class readers. Wyndham’s novels the Day of the Triffids, The Karken Wakes, The Midwich Cuckoos, expressing ‘Fear’ fear of life generally. The fear women, female sexuality and sexual relations totally create Fear in the mind of character.

**Arthur C Clarkes (b.1917) alien children in Childhood’s End (1953)**

Clarke’s vision of final destiny of mankind is well evident in his works. He imagined several disasters, in early short stories. He is the great English visionary and the laureate of “vision of future”. Yet his far future visions are deeply rooted in the British post-war world. His early novel ‘Childhood End’ (1953) depicts the end of humanity after arrival of the superior over lords. The days are very near when mysterious lord rule humanity, alter the world and forms a world government. No doubt, they turn the planet into a prosperous Utopia, humankind enters a golden era, but they resemble devils. They take over a control of human minds, and are interested in psychic research. It is noted that the overlords are preparing humanity for its evolutionary change. This results in human children join the over mind. This is marvelous but destructive one. It destroys the children, which is humanity’s end. The parents see their children something alien, and unable to follow humanity. The book deals with Clark’s vision of future of technology where human beings reduced
to alien figures. The transcendence of humanity into the over-mind is psychic research. Overlords use their advance technology to achieve their end. Their technology is very fast indeed, They can do whatever they want. They can block out the sun, go beyond rules of nature.

Childhood’s end often announces the end of humanity and arrival of overlords or satanic devil. The devils can be seen as negative aspect of life. The overlords brought new technological power, altered the world but degraded human community. Over mind is science fiction’s hypothetical experiment to achieve over whelming technology

Over mind is a sign of over intelligent mind comes with telepathic powers that develop amongst the children. Almost all Clarke’s other fiction has presented a vision of future, space exploration and destiny of humanity. In his vision he resembles H.G. Well’s futuristic ethos of science fiction. Clark Wrestled with important problems of future advanced technology and its effect on human development. As Edward James the author of the chapter “Arthur C. Clarke” in A Companion to Science Fiction observes, “Clarke has an international vision and voice, which is very rare among top science fiction writers. But he also has a very English voice. His optimism about the future may be seen as an American trait; but his doubts, and his frequent reminders that all civilizations are ultimately doomed seem very English” (P.432). James admits that Arthur C Clarke is one of the top writers of SF Novels who blends the spirit of English voice with American optimistic view, the same he breathes it in his works. He seriously engaged in extrapolation of possible future. His space odyssey (1968), Rendezvous with Rama (1973). The Final Odyssey (1997) are most widely read in SF novels.


The 1960 – like the turn of the twentieth Century carried a high degree of special experimentation on the very nature of science fiction itself .Obsessed with traditional SF, New wave writers turned imagined theme to a present
reality. The shift of focus was, SF would not happen in future but must happen now only. Both in form and content, the term adopted popular culture coupled with an image, search for the true essence of human existence. The term came to be known as new wave. As Damien Broderick the author of the chapter “New Wave and Back wash: 1960-1980” in The Cambridge Companion to Science Fiction observes:

The Emergent movement, a reaction against genre exhaustion but never quiet formalised and often repudiated by its major exemplers, came to be known as the new wave, adopting French Cinema’s nouvelle vague. Auteurs such as Jean-Luc Godard and Francois Truffau broke with narrative tradition at the start of the sixties, dazzling or puzzling viewers with tapestries of jump cuts, meanderings, all-but-plot less immersion image. (P.49)

Writers were beginning to explore new vistas exploded in technological media. New wave in SF, historically started in England with its British authors, particularly under the pioneering efforts of Michael Moorcock (b. 1939) from 1964 to 1971. He started London magazine ambitious literary piece of work. He fostered the development of new wave in the UK and in the United States. Morcock’s aim, stated in his first editorial, was to refine SF not as ‘Science fiction’ but as the more inclusionel category ‘speculative fantasy’ and with this to promise nothing less than an important revitalisation of the literary main stream Morcock states that it is often taken to be a deliberate attempt to produce speculative fiction bringing novelty to the SF novel and consider it under main stream. J.G. Ballard fellow revolutionary also as a guest editor rebuilt SF into something original and new.

Yet the New wave SF dismissed old ideological mystification, brought psychological effects of technology in content. It changed the course of genre. As J.G. Ballard has observed

“The biggest development of the immediate future will take place, not on the moon or mars, but on Earth insisted Ballard, and it is inner space, not
outer, that needs to be explored. The only truly alien planet is Earth.” (Quoted by Brooks Landon in *Science Fiction After 1900* P.151) Ballard admits that new wave does not explore outer planets which beyond our limits but goes deep into changing social political life affected by technology. It largely is engaged with culture issues, sex soft sciences like psychology, sociology and anthropology thereby marks a sea change in the old tradition. The new wave project in England specially built by a small group of writers – most notably Moorcock, J.G. Ballard, Brain Aldiss, John Brunner, Pamela Zoline, Christopher Priest, Thomas Disch and Samuel R Delany. In America most prominent authors of the 1960 inclu 
ding Harlan Ellison, Philip K Dick, Robert Silverberg, Disch Delayand enough others to lead this movement effectively to assess this,

3.6 Man Meets Machine

SF was becoming cosmopolitan after 1980s with the development of technologies and advancements in science, information explosion began dramatically to impact upon our lives in the 1980s, some saw the increasing role of computer technology when the Internet began radically rule our mind. The computers increasing day by day and suggested a system became fast and efficient. As Jameson observes:

> The computer was an inert box yet suggested a system a worldwide disembodied yet increasingly total system of relationships and networks hidden beneath the appearance of daily life, whose ‘logic’ is sensed in the process of programming our outer and inner world even to the point of colonizing our former unconscious. (Quoted by Roger Luckhurst in *Science Fiction* P.198)

Luckhurst admits that system that influences the complex phenomenon of daily life, man meets machine for his progress to the next level of existence. When Internet access and complex database, shaped our sense of the nature of the real world, some new aspects of the life man began to adopt it needfully and attempted to assimilate it. Then **CYBERPUNK WAS BORN.**
Work Cited


