

# SCIENCE FICTION: WHY ARE THESE POSSIBLE WORLDS WITH US?<sup>1</sup>

## 1. Stories

Story-telling would have been a pastime of man almost from the time that he could speak. In all cultures, folk tales, fairy tales, stories of gods, biographical sketches, were treasured, to which, for example, the *Pancatantra*, *Jataka stories*, *Aesop's Fables* or *Arabian Nights* testify. History itself, for instance the *Mahavamsa*, could be looked upon as a story of individuals, of countries, of civilizations.

Most of the ancient stories are both entertaining and educative. A story taught a moral. Sometimes the stories were narrated; or written or re-written in verse-like our *kavi-kola* or our poetry books like *Kavyasekharaya* or *Guttala Kavya*; or again the story was written in the form of a play, like Shakespeare's dramas; but more often these appeared as prose. In all these forms, some of the stories were part of the serious-or mainstream-literature.

## 2. The Novel

Though all stories, except perhaps faithful biographical and historical sketches, would have had a considerable imaginative, creative or fictitious element, the present day form of writing prose fiction -- the novel and the short story -- is of comparatively recent origin. Although the earliest prose fiction is traced back to the Japanese tales of *Genji*, written a millennium ago, the novel developed as a major form of literature in the West. The first novels date back to the beginnings of the seventeenth century and indeed this coincides with the rise of science. Italy was the cradle of the Renaissance as well as the Scientific Revolution, and the name novel, which indicates that it was something new, is itself traced back to the Italian term *novella*. Post-Renaissance Europe, in as much as it gave rise to science, gave rise to the novel, and this, I believe, is due to the freedom and the vision of conquest that the Renaissance brought about, well depicted by the famous Florentine Sculpture David of Michelangelo, together with the wide scope opened up for imagination and narration by the great explorations and sea-voyages. The Scientific Revolution re-oriented the

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mind liberated by the Renaissance. The flat Earth had become spherical and the Copernican Revolution had sent it firmly to the orbit. Man was humbled but made more curious. The Industrial Revolution transformed human material life. By the nineteenth century a new understanding of biological and socio-political life was emerging. The Darwins (Erasmus and Charles) brought Natural History and Evolution into the picture. Malthus had written his *Essay on the Principle of Population*. And English liberalism had dawned.

Daniel Defoe's (1660-1731) *Robinson Crusoe* could be considered the progenitor of novels in England and Cervantes' (1547 - 1616) *Don Quixote* the beginning of the Spanish novel. Voltaire's *Candide*, written in 1759, though not the first work of French fiction, reflects its times and trends and influenced the movement for revolution in France. James Fenimore Cooper's (1789 - 1851) *The Last of the Mohicans* was an early, though not the first, North American novel. All these are based on voyages, travel, exploration and conquest.

The printing press which came to Europe from China and was further improved in fifteenth century Europe helped the spread of this new form of literature. It blossomed in Europe, and led to the great Russian literary creations like *War and Peace* of Tolstoy (1828 - 1920) and *The Brothers Karamazov* of Dostoyevsky (1821 - 1881).

### 3. Science Fiction - The Beginnings

If the beginning of the European novel is less than four centuries old, science fiction (SF for short) itself is just over a hundred years old. For although there are a few SF fans who would claim that stories of "lost continents" like Plato's Utopia *The Republic* to Swift's political satire *Gullivers Travels* are SF these are at best "Proto - SF". Mary Shelly's *Frankenstein* (1818) is sometimes mentioned as a piece of early science fiction and so are some short stories of American writer Edgar Allan Poe. But the beginnings of SF are more aptly traced to the work of the French writer Jules Verne (1828 - 1905) and the English writer H.G. Wells (1866 - 1946). Verne's books *Five Weeks in a Balloon*, *A Trip from the Earth to the Moon* came in the 1860s and *Twenty Thousand Leagues under the Sea* and *Around the World in Eighty Days* appeared in the 1870s. Wells' *Time Machine* and *The War of the Worlds* came out in the 1890s. Jack London who wrote *Before Adam* (1906) and the *Iron Heel* (1907) is considered the first American science - fiction writer.

### 4. What Is Science Fiction?

Science fiction has been defined in various ways by its writers and commentators. SF has been associated with fantasy and it has also been called speculative fiction.

Some maintain that good science fiction is grounded in the concepts of the natural sciences and the technologies that have utilized these concepts. But, as we shall see, the concepts need not be restricted to the natural sciences.

Kingsley Amis, a practitioner of the art, defines SF as "that class of prose narrative treating of a situation that could not arise in the world we know, but which is hypothesised on the basis of some innovation in science and technology, or pseudo-science or pseudo-technology."<sup>2</sup>

The following give some other accounts of the nature and scope of science fiction.

"Imaginary voyages, remarkable inventions, predictions and social satire-science fiction speculates; it synthesizes an array of possible futures towards which man and his social structure may be directed".<sup>3</sup>

"Science fiction is that branch of literature which is concerned with the impact of scientific advance on human beings."<sup>4</sup>

Judith Merrill, who seems to equate science fiction with what she calls speculative fiction, says that speculative fiction consists of those "stories whose objective is to explore, to discover, to learn by means of projection, extrapolation, the nature of the universe, of man, of reality".

She goes on to say that speculative fiction is that "mode which makes use of the traditional "scientific method" (observation, hypotheses, experimentation) to examine some postulated approximation of reality, by introducing a given set of changes-imaginary or inventive-into the common background of 'known facts', creating an environment in which the responses

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<sup>2</sup> Kingsley Amis, in *New Maps of Hell*, New York: Arno, 1974, p. 18.

<sup>3</sup> Martin Harry Greenberg and Patricia S. Warrick, (ed.), *Political Science Fiction*, Prentice-Hall 1974, (Hereafter, PSF).

<sup>4</sup> Issac Asimov, in *Otherworlds to Conquer* (ed.), Joseph D. Olander and Martin Harry Greenberg. New York, Taplinger Publishing Co., (1977), (Hereafter, *Asimov*) p. 14.

and perceptions of the characters will reveal something about the inventions, the characters or both."<sup>5</sup>

Science fiction today has ramifications such as social science fiction, political science fiction and so on. SF extrapolates scientific concepts and gadgets, but these are not only those of the natural sciences. For example, George Orwell's *Nineteen Eighty Four* which easily falls under classic political science fiction, is hardly based on technological innovations. Then again, if we use Amis's definition, the SF writer could use pseudo-science.

Let us imagine a situation where a person remembers his last birth. If he writes or narrates this story, its loves and strife (we get these stories all the time, and the study of rebirth is done by scientists like Ian Stevenson, but is it a pseudo-science?), will that be science fiction?

If H.G. Wells could travel forward to 800000 A.D. in his Time Machine (which was only a mental construction) why cannot another travel back in his mind a hundred years, and why is the latter account not science fiction? Because, one would say, it is neither a construction, nor a fiction, for it is given to and by the narrator as reality, whereas H.G. Wells well knew, and the readers know, that the Time Machine and the world it discovered was a construction. But suppose I write the story of my past birth-though I do not remember it. I construct it. I imagine myself going to my last birth not with a time machine but by introspection i.e., by my mind or memory reaching there. Going by my present misfortunes I trace my *kamma* back and reconstruct my past life, using the concept of re-birth (and constructed introspection) which is, say, a pseudo scientific concept. Will my story be science fiction?

This is not a problem which can or should be overcome by refining Amis's definition by dropping the use of the pseudo-science part of it. For what is science or pseudo-science at any period in time is relative to that period and science fiction itself, as it is today, is a lot of pseudo-science by present day conceptions and possibilities.

Another question of interest is whether we can write science fiction about the present. The answer seems to be 'yes' and 'no'. Many are familiar with the short story in G.B. Senanayake's collection *Paliganeema* where a person after mistakenly drinking a drug which leads to hallucination is made to see a person following him to kill him. He tries to escape by various ways, but it is futile. He runs for his life but the killer follows him to his home, until he crashes down and awakens to the actual situation. This could be a piece of

<sup>5</sup> Judith Merrill, "What Do You Mean: Science? Fiction?" in *SF: The Other Side of Realism* (ed.) Thomas Clarendon, Bowling Green: Bowling Green University Popular Press, (1971), p. 60.

science fiction, and there are hundreds of similar stories in literature. The setting of this story, and many stories like this, is the present. But why is this science fiction? Because there was no drug, generally known, which could have produced such a hallucination when the story appeared. So it was a projection. Part of it, the drug, is not there in the present.

Before I take up the definition of speculative fiction as science fiction, I wish to ask, is the story of Ravana travelling in his air-borne machine *Dandumonera* a piece of science fiction? Or even the story of Mahausada's construction of a tunnel as well as lighting the whole tunnel with one switch, as it is found in the *Ummagga Jatakaya*? The immediate response would be 'no'. It is pure imagination, pure fantasy. Not an extrapolation of science. This would at best be proto - SF. But suppose Roger Bacon (1215 - 1292) who was an early scientist before the birth of modern science proper and who predicted the construction of airplanes, had written a story using the idea, would it have been the first of science fiction? Where does the thin line lie?

Let us now take the definition of speculative fiction given above. It does not directly refer to the use of science and technology. It refers to the use of scientific method and the 'known facts' in the construction of speculative fiction.

Speculative here seems to be taken in the sense of 'pursue an inquiry ... form theory or conjectural opinion'<sup>6</sup>. A problem that one could have with the term speculative fiction is that not only science fiction but other stories like historical novels could be speculative in the same sense. This definition also refers only to a background of known facts as the take off point or the point of reference. Such a general contention of reference allows us to bring for example, historical novels under speculative fiction. Moreover, 'known facts' is a very vague term and people may disagree as to what the known facts are. Known facts in the Aristotelian Universe are quite different from the facts of our world. Even today, particularly in the social sciences, there will be disagreement over the question as to what facts are known.

The idea that "scientific method" (observation, hypothesis, experiment) is used in the construction of speculative fiction is interesting, but the analogy seems literally inaccurate. In the first place, the experiments here are thought experiments, also called *Gedanken* experiments. No doubt such thought experiments helped the progress of science; for instance, Einstein's imagining that if he raced at the velocity of light with a ray of light he would perceive the ray only as an electromagnetic wave in oscillation was instrumental in the

<sup>6</sup> Cf. *Concise Oxford Dictionary*.

conception of the Special Theory of Relativity<sup>7</sup>. But mental experiments are not the key experiments in the traditional scientific method. The observations in the given definition are the facts which are already known, the hypothesis is the postulated approximation to reality, but the 'changes and responses' to them remain just mental constructions, even if they turn out to be realizable someday. So the use of traditional 'scientific method' in the construction of speculative fiction is a far cry from reality.

Science fiction usually provides settings that are different from our world of everyday experience. For example, we are taken into the future or the past, a different world like another planet or we are made to encounter a different type of being, e.g., Martians. Arthur C. Clarke in his Kalinga Award speech says that the science fiction writer, "by mapping out possible futures as well as good many impossible ones...encourages his readers flexibility of mind, readiness to accept and even welcome change-in one word, adaptability" (Arthur C. Clarke, *Voices from the Sky*, New York, Harper, 1965, p. 164). SF writers adopt the method of extrapolation i.e., taking up current trends and developments and projecting them forward in time and Gedanken experiment (thought experiment) in their method, as we already noted.

It is the ideas and situations and not characters, which gain dominance in SF. The ideas are mostly drawn using the hard sciences as base but today psychological, anthropological or socio-political ideas are also sources.

As literature, science fiction uses these ideas and constructions to deal with the human condition-its fears, and hopes, and predicaments. The artefacts, locations and devices in SF in this sense are symbols, metaphors or allegories. Science fiction is, in a sense, the mythology of the age of Science.

## 5. Science Fiction: Themes and Development

There are different classifications of science fiction. One classification, based on content, is into imaginary voyages, remarkable inventions, future predictions and social satire. Some works fall into more than one of these categories. Another classification could be into natural science fiction, social science fiction, political science fiction and so on.

Originally, science fiction was close to mainstream fiction: Jules Verne's *Around the World in Eighty Days* had elements of exploration, romance and drama which could have allowed it to pass even as a mainstream novel. H.G.

<sup>7</sup> Albert Einstein, "Autobiographical Notes" in *Albert Einstein: Philosopher Scientist*. (ed.) P.A. Schilpp, Illinois: The Library of Living Philosophers, 1949, p. 53.

Wells's *Time Machine* was more radical, mostly due to his conception of time travel and perhaps his account of the society in the distant future, "Eight hundred and Two Thousand Seven Hundred and one A.D. for that was the date the little dials of my machine recorded."<sup>8</sup> And what he sees is a communistic humanity, degenerated due to the non utility of their faculties, due in turn to the lack of necessity. But Wells brings in a little romance, unfulfilling though it is, with a little female creature of this society, Weena. Thus adventure, romance and social satire are wound together in his novel.

Wells wrote not only science fiction but other novels like *Kipps* as well, as he was a mainstream novelist. Science fiction of this early period, that is, until about the 1930s, was less technical and the language used was not very different from that of mainstream fiction. Usually, the central characters in the stories were made to be slightly unusual, a little "loony" or a bit out of the ordinary. And this gives a 'believe it or not' touch to the story. Thus we find others saying of the Time Traveller:

I think that at that time none of us quite believed in the Time Machine. The fact is, the Time Traveller was one of those men who are too clever to be believed: you never felt that you saw all round him.<sup>9</sup>

In Wells' novel *Star Begotten* the main character, although a historian, is treated as loony. He goes on believing that the Martians are somehow influencing the affairs on Earth: they are already here at work, and he wonders whether their first child that his wife is bearing at the moment is going to be a product of some Martian influence. C.S. Lewis, much later than Wells but another representative of this era, wrote novels like *Out of the Silent Planet*, and *Perelandra*. In the former, a physicist who wants to conquer the other planets and a business minded man who wants to plunder the gold that is abundant on a planet called Malacandra which eventually turns out to be Mars - abduct a philologist and take him with them.

In Malacandra they are found to be wanting in their morals, particularly the physicist and the businessman, and are sent back to Earth by the spiritual leader of Malacandra who seems to be served by some sort of angels called eldila. Even here, all three who went to Malacandra are portrayed as slightly eccentric. The last author from this period whom I want to mention is Aldous Huxley who wrote *Brave New World*, in 1932. In this he created a new utopia of

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<sup>8</sup> H.G. Wells, *The Time Machine*. London: Ernest Benn, 1927 (1966 Edition), p. 33.

<sup>9</sup> op.cit., p. 17.

a technologically conditioned society where everyone was happy because one has been conditioned to want only what she/he is supposed to want. In this utopia genetic engineering produced people of different levels of intelligence. And each happily filled her/his role in the society. A little soma drug (liquor) and a little sex tempered any minor irritations left over in a person. But the question that Huxley poses is - what price happiness if man has to buy it sacrificing his freedom to make choices? Huxley's *Island* published in 1962, is "another utopian spoof". The scene is Pala, an island in South East Asia, "dedicated to contemplative life." It presents, like Plato did in *The Republic*, "a view of what society is not but might be."

In the four authors that we considered from this early period of science fiction, Verne's preoccupation is with voyages and inventions, Wells' concern is with prediction and social comment, C.S. Lewis' interest was primarily theological and Huxley focussed on social and moral criticism. Thus, Wells, Lewis and Huxley could be considered to have written social science fiction. They are not much differentiable from the mainstream fiction in style as Verne, Wells and Huxley could very well be considered mainstream writers.

We now enter the middle period in science fiction-the period which some have named the period of High Science Fiction. It runs from the 1940s to the early 1960s. Science Fiction now becomes very "technical", if one is inclined to call it so. There is an experimental approach to writing and a faith in scientific progress. The readers of this fiction were not literary-wise inspired. On the other hand they were not all familiar with the concepts or jargon and the technical gadgets, actual or imaginary, which these novels mentioned. So we find the authors writing in "plain" language, used for technical writing. In an attempt to be clear, they try to describe-rather explain-the gadgets and their workings most of the time. They use short sentences. By this time computers, robots, artificial intelligence, satellites and space travel had entered science fiction in a big way. Two of the giants of this period are Arthur C. Clarke and Isaac Asimov. Let me quote a passage from Clarke's *The Fountains of Paradise* to illustrate this style and language.

"Range three zero. Turbulence getting worse. Drifting badly to the left. Impossible to calculate correction. Movements too erratic."

"I've got it" Morgan cried. "It's through the clouds!"

"Range two five. Not enough propellant to get back on course. Estimate we'll miss by three kilometers."

"It does not matter." shouted Morgan. "Crash where you can!"

"Will do soonest. Range two zero. Wind force increasing. Losing stabilization. Payload starting to spin."



"Release the brake. Let the wire run out!"

"Dispenser malfunction. Payload spin now five revs. per second. Wire probably entangled. Tension one eight zero percent. One nine zero. Two zero zero..."<sup>10</sup>

Here is Morgan, the engineer hero of the story, trying to exhibit the strength of a wire and the possible usage of its material in service of a tower to take space passengers to stations high above Earth. I shall come back to this story again in a later section.

The themes during this period are complex. Voyages, space exploration, social criticism, prediction as well as invention are worked into the stories. The two authors I mentioned wrote a large number of space stories, but Asimov used them for social criticism, whereas Clarke was more of a mystic. The readership they catered to were, on the one hand, high school children who imagined they themselves would be spacemen one day. The mature audiences needed a deeper, philosophical, psychological, sociological treatment of the themes. This generation of writers, to meet this demand, used physical concepts and technological creations coupling them with a simple language with metaphorical and symbolic expressions. A few titles from these two writers would indicate their themes.

**Clarke:** *Across the Sea of Stars, At the End of the Orbit, Cosmic Casanova, Curse, Last Command, Nine Billion Names of God, Time's Arrow, 2001: The Space Odyssey.*

**Asimov:** *By Jupiter, Currents of Space, Darwinian Pool Room, Last Question, Night-fall, I robot, Thiotimoline and the Space Age, Gods Themselves.*<sup>11</sup>

Asimov, probably in his attempt to solve the problem of machine versus man, (and perhaps man vs. man using robot) came out with his Three Laws of Robotics, which echoes Newton's Three Laws of Motion.

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

<sup>10</sup> Arthur C. Clarke, *The Fountains of Paradise*. New York: Ballantine Books, 1978. p. 160.

<sup>11</sup> *Science Fiction Story Index 1950-1979*, Chicago, American Library Association, 1981, pp. 309 - 316 and 362 - 369.

2. A robot must obey orders given it by human beings except where such orders will conflict with the First Law.
3. A robot must protect its own existence as long as such protection does not conflict with the First or Second Law.<sup>12</sup>

Asimov handed over the construction of all his robots to the U.S. Robot and Mechanical Corporation. Robot colonies were used to run the systems in the Earth colonies in outer space.

The *third period* in science fiction dates from the early sixties. A new set of writers with a more literary bent and less interest in science enter the scene. This is the New Wave. Their writing is more in the tradition of literature and poetry. I shall quote from an award winning piece "*Repent Harlequin*" *Said the Ticktockman*, by Harlan Ellison, a writer and editor closely identified with the New Wave.

Jelly beans! Millions and billions of purples and yellows and greens and liquorice and grape and raspberry and mint and round and smooth and crunchy outside and soft mealy inside and sugary and bouncing jouncing tumbling clittering clattering skittering fell on the heads and shoulders and hard-hats and carapaces of the Timkin workers.<sup>13</sup>

Asimov indicates the approach of the New Wave, as well as the attitude to it of the earlier group to which he belongs, when he says that New Wave writers "have a stronger literary background and are more interested in stylistic experimentation and in the new freedom with which sex and inner consciousness may be explored" while at the same time they are "not as science oriented as the writers of a generation ago."<sup>14</sup> Two of the outstanding American SF writers of this period are Samuel Delany and Ursula K. Le Guin.

Although the subject matter of SF becomes increasingly varied, its limitations are hinted at by the veteran British SF writer Brian Aldiss, who updated his history of science fiction, *The Billion year Spree*, sometime back.

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<sup>12</sup> Asimov. p. 18.

<sup>13</sup> Harlan Ellison, "*Repent Harlequin, 'said the Ticktockman*" reproduced in *PSF*. p. 236 ff.

<sup>14</sup> Isaac Asimov, in *Nebula* No. 8. p. XVI. quoted in *Asimov*. p. 70.

Aldiss says, "I'll tell you what they are about, mainly and in two words: Fantasy and America."

Aldiss laments the swing from science-oriented works towards stories of galactic empires. "The Galactic Empire is in for a long run, fuelled by American dreams of glory."

"I want SF to be about everything, to include everything. Its true range has greatly extended during the period I have been writing, but I am impatient for more."<sup>15</sup>

## 6. Science Fiction: The Contemporary Social Setting

We saw that the novel originated with the stories of explorers and travellers e.g., *Robinson Crusoe* and *Don Quixote*. Similarly, when the American West was being explored or conquered, westerns or stories about the American West caught the imagination of the writer and the market. Both these gave a lot of material; adventure, treasures, war, conquest, love, heroism which in blend caught the readership.

Science itself is an exploration, of the inner working of natural phenomena. With the beginnings of actual space travel has dawned the possibilities of exploration in a sense similar though more daunting than post-Renaissance sea voyages or the conquest of the American wild West. Science fiction bases itself on both these senses of exploration and in recent times space travel, robots and space-colonies of man have dominated its themes.

Thus in one way SF is a natural outcome, *in contemporary terms*, of man's interest in adventure, exploration, conquest and imagination about the unknown and the remote, the near mystical.

Looked at from another angle, SF depicts the life style of the times, as most literature did and does. We (or science) passed the mechanical age and entered the electro-magnetic age by the turn of the century. In the developed countries the computer has entered the primary class room and the television has become the baby-sitter in America. Jet travel, although its mechanics could be primitive compared to that of space-travel, is so commonplace today that almost everybody in the developed countries experience it early in their lives. The jet-plane and the motor car run American life. Even the poorer and less educated in the underdeveloped countries experience jet travel today, for example, plane loads of house-maids and other workers who travel from our countries to the Middle-East and back.

<sup>15</sup>

*Publishers Weekly*, May 23, 1986 (Hereafter, *PW*), p. 43.

Playing electronic games is an obsession of the young in the West today. Pressing the button for almost anything -- for light, telephone, television, transport, drink and food -- is the commonest thing in today's world. Days of quick or long and troublesome mental calculations are gone; every sales girl uses a calculator. (And, incidentally, we have the New Maths and today less and less people learn to calculate mentally.) Communication through satellites, genetic engineering and artificial intelligence are common knowledge. Life has become mechanical, it has become electro-magnetic. Man is becoming a bit robot like.

Man is becoming machine-like in another sense. With exploration, colonization, industrialization, Western man spread himself over the globe. These changes, after the Renaissance and the rise of science, led to individualism; consequently family ties, even marriage as an institution - I mean as a life long partnership - is under threat, partly due to the pressures of life, partly due to the outlook on life. The new world-view is based on science, industry, technology, and commerce. Copernicus floated the Earth and man today is in a Cartesian whirlpool which carries him from job to job, from partner to partner (or no partner) and from place to place across the continents, across the oceans, and will it be, if science fiction turns out to be reality, across space to satellite space colonies and the planets?

These strains and experiences are not completely confined to the West. The South Asians, for example, have their own colonies in London, Toronto, New York, Los Angeles, and of course, Australia. Their children join the children of the whites and the blacks in front of the computer in the primary class, for electronic games. Some of the gadgets they use have been produced in high-pressured Japan or were simulated in Taiwan, Hong Kong or Singapore. Those who are unable to go to the West, go to the Middle-East, South-East or Far East leaving their families behind.

The point is, the old values and life styles are dying fast in the entire world. New life styles are emerging, but what are the new values-values in the moral sense? Are we becoming cogs, automata, on robots? Are we already at the mercy of the computer? Science is said to be value-neutral. It would probably be called emotion free as well. Is science (and technology, industry and commerce) moving us towards a land of less emotions, little ethics and greater self-gratification? Globalization is the term and with it the uprooted individuals are so far in what Ken Wilbers called flatland or the collapsed Kosmos. (*A Brief History of Everything*, Shambala, 1996, pp. 267 ff.)

## 7. Science Fiction: Culture, Claims and Deformities

C.P. Snow, in *The Two Cultures and the Scientific Revolution* lamented over the communication gap or the intellectual rift between the men of science

and the men who practised literary and other non-scientific disciplines.<sup>16</sup> Some writers on science fiction seem to feel that science fiction somehow could bridge this chasm.<sup>17</sup>

Snow might have been correct about the communication gap between the two groups of intellectuals, but there is a much more significant problem which we must take up here. Intellectuals are a small minority and as Jacques Barzun points out "... When added together, the two "cultures" leave out ninety-nine - hundredths of the population."<sup>18</sup> (and he rightly asks) "Does this remnant form a third culture, neither scientific nor humanistic?"<sup>19</sup>

It is important to discuss this broader issue concerning the whole population. Barzun goes on to argue that there are no two cultures, but only one. "The truth is that all these men, together with those for whom the issue does not even begin to exist, belong to one culture, the scientific culture of the Western World in the twentieth century."<sup>20</sup>

Barzun is speaking about the Western society but the argument in Section 6 above has been that this culture or world-view or life which is dependent on science and technology has spread all over the world -- rich and poor, capitalist and communist, black, white, yellow and brown. Another statement of Barzun links up nicely with the position that was outlined in Section 6.

During the past thirty years the articulate have increasingly cried out against the tyranny of scientific thought, the oppression of machinery, the hegemony of things, the dehumanization brought about by way of number and quantity<sup>21</sup>

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<sup>16</sup> C.P. Snow, *The Two Cultures and the Scientific Revolution*, New York: Cambridge University Press, 1959.

<sup>17</sup> See, for example, *PSF* p. 1, and *Asimov*, p. 70.

<sup>18</sup> Jacques Barzun, *Science: The Glorious Entertainment*, London: Secker & Warburg, (1964). (Hereafter, Barzun). p. 11.

<sup>19</sup> loc.cit.

<sup>20</sup> op.cit., p. 12.

<sup>21</sup> op.cit., p. 1.

Barzun wrote in 1964 and thirty six years later, today, we see that the conquest by *Techne* has moved at an accelerated speed. So, could one look at science fiction (and note here the rapid growth of science fiction, star war television, etc. during the last three or four decades) as another instrument of the *Techne*-in its non-retardable conquest? Science fiction then becomes a symbol of complete take over - of even creative literature - by science!

Science fiction writers and their commentators would not see the situation just on such a basis. The emergence of science fiction, as they see it, is mainly due to the failure of the earlier forms of literature. Let us look at one such view.

Mathew Arnold suggested in the nineteenth century in his *Science and Literature* that as science more and more replaced religion as man's intellectual concern literature promised to be the most workable mode to interpret man's universe for him and to provide a guide for making meaningful choices.

But the mainstream literature today-and particularly fiction has not fulfilled that promise. The contemporary novel is not a dynamic force for the young, for several reasons. First, it presents an anti-hero, alienated, unable to cope, without ability to act. Second, the world it creates seems almost devoid of science and technology-this at a time when science and technology are vastly altering the real world. Finally, modern fiction ignores the future that man must make his final concern ...

Clearly a new literary form is necessary -- as the new discipline of futurology points out, we must study and choose wisely between the alternatives that technology can make available in the future if man is to survive.

Science fiction is that new literary form. (It is) a child born of the marriage of the sciences and the humanities. As Alvin Toffler states so forcefully in *Future Shock*, the present is a time of accelerating changes; something is happening. When Estragon in Samuel Beckett's *Waiting for Godot* said, "nothing happens, nobody comes, nobody goes, it's awful"; he was not in touch with the forefront of scientific thinking. Science fiction conveys this rapid change, gives it a sense of adventure, and offers an array of possible futures towards which man and his social structure may be directed."<sup>22</sup>

Now this is a massive claim but there are even larger ones made for science fiction. Let us now ask two questions:

- (i) Is science fiction a means of integrating the two cultures spoken of by Snow, taken in the broad sense, that is, to encompass the whole population?
- (ii) Is science fiction performing the role that Mathew Arnold envisaged for literature in the era of science?

In answer to (i), one can say that it is true that science fiction links the man conversant with science with literary craft. Most science fiction writers are people with some scientific training (Snow himself was a physicist. He wrote novels, his fiction, though, is no SF. His novel *The Search* dealt with scientists involved in research, but that by itself would not make it science fiction). Thus, for example, Asimov holds a Ph.D in biochemistry and was a teacher in a medical faculty, a job which he gave up to do full-time writing. Arthur C. Clarke's scientific interests are well known. Wells studied science, even worked for a doctorate in his seventies, and one of his cherished ambitions was to be elected a Fellow of the Royal Society (which, unfortunately, was not fulfilled).<sup>23</sup> Gregory Benford, another contemporary SF writer, teaches and researches in Astrophysics at the University of California. Others, like Jack Williamson, who is a Professor of English, would have, probably on their own, mastered some science.

The majority of those who read science fiction stories in the West are young people between the ages of fifteen and twenty-five. They have had some University or High School level education.<sup>24</sup> So the readership probably does have some knowledge of science and interest in reading adventure, if not literature.

Science fiction thus might have a role in bringing the two cultures together. But the more plausible view seems to be that science fiction is catering to the single culture (*a la* Barzun) that is spreading, giving it popular doses of that culture and in the process, popularizing that culture.

In answer to (ii), most people with any sophistication would agree that science fiction, as it is, does not perform the role that Mathew Arnold wanted literature to take up. Obviously the role is about a choice, an ethical or spiritual choice. That it was such a choice that he meant is clear by his reference to the need for a substitute for religion. What he meant, I believe, was something more akin to the choice that Existentialists try to indicate in their literature.

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<sup>23</sup> C.P. Snow, *Variety of Men*, Harmondsworth, Penguin: 1969 (Hereafter, Snow) pp. 73-74.

<sup>24</sup> *PW*, p.63.

The science-fiction writers' position is that they create possible alternative worlds--so that the readers would be kept in readiness to choose between them, when occasion demands men to choose. One of their main claims is that change is taking place and that science fiction makes man ready to accept change.

Science fiction makes the reader more flexible or at any rate it goes well with the young whose minds are more flexible. But there could be concern that most SF writers who believe in science also believe that science brings progress or that the march of science cannot or should not be retarded and this may not facilitate meeting the required ends. Science fiction writers are creating a mythology, the mythology of science, for our younger generation, the generation that wants to be spacemen at least in their thinking. Widening one's horizons literally, to see the depth of space is good contemplation. It makes one humble, realizing its immensity and one's insignificance. It makes one forget about all one's differences on Earth, Caste, Creed, Nation, Colour, Sinhala, Tamil, Zulu indicating the pettiness of it all. By depicting Earth as one "power" in the inter-planetary colonialism, people on Earth could be made to feel united, to realize that they should get together and share resources. Meditating on Space, making one's mind as free and as all encompassing as space, for example, is one of the higher states (*dhyana*) that one could attain in Buddhism. It is called *akasannayatana*. All this and much more could be claimed for space-oriented science fiction themes. Science fiction has brought about the conflict between man and his creation, the machine, in the sharpest possible way, as the challenge of the robot to man at his highest level. Moreover, writers like Asimov have used SF to criticise racial discrimination and other social evils. All the same I find something to be missing in most SF. It is flat, and indeed as even the term 'star wars' could indicate, destructive most of the time.

The choice that Matthew Arnold would have meant, when he wrote *Science and Literature*, as far as I can see, is the choice between the good and the bad, the beautiful and the ugly, the spiritual and the non-spiritual. Much of the science fiction that has been written does not prepare man to choose between these. But serious literature perhaps should, and that is what Arnold would have had in mind. Perhaps the mainstream literature has failed to achieve this objective. But science fiction does not seem to have done better in this respect either.

One problem I see is the arrogance of science as manifested in the science fiction writer. Take, for example, *Evidence*, quite an entertaining story, almost a thriller, written by Asimov. Two men, Quinn and Byerley come forward as candidates for Mayorship of a city. Quinn, finding Byerley unbeatable, "cooks up" his last card-that Byerley is a robot, and not a man. In the battle of wits and strategies that follows the proof or disproof of this becomes almost impossible, but finally, Byerley "Proves" that he is a man by



hitting another man: (because Asimov's three Laws of Robotics do not allow a robot to hurt a man). Byerley becomes Mayor. Dr. Susan Calvin, robot psychologist in the story, meets Byerley one night and in the discussion with him says,

"I mean there is one time when a robot may strike a human being without breaking the First Law. Just one time."

"And when is that?"

"Dr. Calvin was at the door." She said quietly, "When the human to be struck is merely another robot". She smiled broadly, her thin face glowing. "Good-bye Mr. Byerley. I hope to vote for you five years from now-for co-ordinator". Byerley eventually becomes Regional Co-ordinator and later World Co-ordinator. He dies and is atomised. So no evidence is left over.<sup>25</sup>

There might be other morals (e.g., about non-discrimination even between men and robots) in this story, but I am interested in a particular issue. What if Byerley was a robot! I think that the story, by suggestion, though not directly, even says that he was. Susan Calvin more or less knew it. She (a woman!) voted for him. The robot became the leader of the world.

Thus robots are better than men. Machines are the heroes. So be like machines. Is this the choice we are given? The choice we are trained for by science fiction?

Consider again, Arthur C. Clarke's *Fountains of Paradise*, from which I quoted a passage earlier on. It is worth our attention not only because of its setting in Taprobane or Sri Lanka but also because of the balanced composition, the interesting world that it creates, and the semi-mystical and complex message that it carries, linking Kalidasa (Kashyapa of Sigiriya) with the Tower to heaven. But even in this beautiful story, who or what are the main characters and situations? A super engineer, Morgan. A super ambassador in retirement, Rajasinghe. A super journalist, Maxine Duval. A Super corporation: Terran Construction Corporation. A super job on which Morgan is hooked: to construct a tower to transport passengers to outer space to save expenses on take off of space-craft from Earth. The site for construction: Sri Kanda or Adam's Peak, imaginarily shifted on to the Equator. The Mahanayake of Sri Kanda and Yakkagala (Sigiriya) add to the mystic and the aesthetic composition.

Neither Morgan, nor Rajasinghe, nor Duval are married or have any family. They are, or have been, brilliant workaholics. Morgan ultimately gets rid of the Mahanayake and the Sangha (from Adam's Peak to Lhasa) in

<sup>25</sup>

Asimov, "Evidence," reproduced in *PSF*, pp. 173 - 192.

experimenting on his tower. As we read on, as when we read many other Space-Travel Association fiction, we feel - rather, we do not feel anything except the fear of heights and space-we think, this is it: work, achievement, brilliance. That is our future life: there is nothing else. No one else. We, the present day human beings (assuming that we still are!), will not be there: Except tourists, one does not even feel that there are any (human) beings in Taprobane or Sri Lanka-below the super structures, the space-stations and the tele-screens that connect Morgan, Duval, Rajasinghe and other workaholics in the story. Morgan sacrifices his life for the tower and ends up as the hero. But even more than in this story, which at least has a more mundane background (just a little above Sri Lanka), in many stories of space-travel the reader does not *feel* that the spacemen have any emotions. But a hero must be able to feel fear. If one is like a machine, one can take a chance, and get destroyed in space. It does not mean anything. A machine cannot be a hero in a true sense, but machines are made to be so in science fiction.

Science fiction writers like Asimov have made even larger claims for SF. He has commented, for example, that science fiction is the only relevant literature for today's world.<sup>26</sup> Although I have cited his claim, I do not wish to explore it any further.

On the positive side, science fiction has had predictive and educative value. H.G. Wells anticipated the use of military tanks in warfare and other innovations.<sup>27</sup> SF writers have taken up issues like atom bombs, overpopulation, environmental pollution, long before others thought about them according to some claims.<sup>28</sup> I mention here one little story, named "Superiority" by Arthur C. Clarke.<sup>29</sup> It indicates that great superiority in new weapons does not necessarily bring victory. It was published in 1951, and it almost foresaw Vietnam. Clarke's story is now required reading for an engineering course at the Massachusetts Institute of Technology.<sup>30</sup>

Again, science fiction popularizes science. Even otherwise many science fiction writers are educators and popularisers. For example, H.G. Wells was immensely interested in education. Arthur C. Clarke has written and

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<sup>26</sup> Asimov, p. 60.

<sup>27</sup> Snow, p. 59.

<sup>28</sup> Asimov, pp. 14-15.

<sup>29</sup> Arthur C. Clarke, "Superiority," reproduced in *PSF*, pp. 351-359.

<sup>30</sup> op.cit., p. 349.

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broadcast on a variety of scientific subjects. Asimov has written over two hundred books, only some thirty odd of them are science fiction.

The feeling that science fiction is not serious literature has been widespread. Even today SF is considered something outside the mainstream of literature. Although it has begun to get the notice of academics and a few courses on it are being taught at the universities in countries like USA and Australia, there is resistance to it being in the curricula of English departments. This, some hold, is the usual resistance to anything "outside" or "new", but that is probably not the whole truth. Although science fiction and the detective story are said to belong to different genres one often sees something of the detective story, the mystery novel, in works of science fiction. Indeed, some of the major story-writers have been writing straight mysteries as well as science fiction mysteries. Asimov is one of them. He created his own outer space Sherlock Holmes - Elijah Baley (of the city of New York Police Department!) who first appeared in his *Galaxy* (1953). Again, writers like Asimov, started writing very young, and as contributors to magazines, though perhaps they matured early.

The idea that there is something common to the mystery story and science fiction comes from other aspects of their construction. First, the language in both these used to be simple, straightforward and rational. Next, both the mystery story and science fiction usually have to depend on the location-in this, science fiction much more than the mystery story - has to concentrate on constructing the location and the gadgets or the alternative world that it reveals. This affects the development of characters and their relations in the story which is what gives depth to a novel. The characters in a detective story are flat or puppet like. The same seems to be the case in science fiction, and this can happen for a number of additional reasons. The science fiction writer is dealing more with ideas than with people. His characters can turn out to be puppets who just serve the purpose of conveying ideas. A work like *Brave New World* of Huxley has been criticized for this lapse although others argue that it is exactly what Huxley wanted to do. In addition, as I have already argued, the characters in science fiction tend to become stereotypes with little interplay of human characteristics or display of human emotions such as fear, anger, or love.

Science fiction is also an industry, a big business. It has a clientele in film and television movie makers. It has fan clubs. This too seems to affect its quality. Brian Aldiss, the veteran SF writer and its historian, says, "SF as big business is bringing us a blander product, one that is enjoyable but not enriching. Our audience is predominantly a young one. We need to attract more readers of mature years. As for myself I never thought I was writing for the millions..."

Fredrik Pohl, another SF writer ways, "There is a strong tendency for the SF reader to be somewhere between 14 and 25 years old. The audience is 60% male...."

"There is also a tremendous audience for the performance varieties of SF - the films and television productions - ... But, ... many of them are never going to read a book of SF or any kind of literature."<sup>31</sup>

Science fiction also has been accused of being escapist. Asimov answers this charge, thus:

Science fiction is based on the fact of social changes. In a sense it tries on various changes for size, it tries to ... penetrate the consequences of this change or changes or that, and in the form of a story, it presents the results to the view of the public, a public that needs more and more to have possibilities of change pointed out to it before it is disastrously overwhelmed by it.

It is this which has always made it seem rather ironic to me that science fiction is continually lumped under the heading of "escape literature" and usually as the most extreme kind, in fact. Yet it does not escape into the "isn't" as most fiction does, but into the "just might-possibly be". It is an odd form of escape literature that worries readers with atom bombs, over population, bacterial warfare, trips to the moon and other phenomena, decades before the rest of the world had to take up the problems.

No, No, if science fiction escapes, it is an escape into reality.<sup>32</sup>

I have tried to indicate that science fiction goes well with the social and mental set of the time,<sup>33</sup> and as science is going to stay with us, science fiction is also going to stay with us. It will have a role to play as educative literature. So far it has not been able to get into the mainstream of literature.

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<sup>31</sup> *PW*. p. 46.

<sup>32</sup> Jean Fiedler & Jim Male, *Isaac Asimov*, New York: Frederick Unger Publishing Co., New York, (1982), pp. 1-2.

<sup>33</sup> Charles N. Brown, Editor and Publisher of *Locus: The Newspaper of the Science Fiction Field*, says, "SF is one of the few genres that reflect the world we live in today-instead of the world that we lived in yesterday". quoted in *PW*, p. 39.

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But at least some of it, and as time goes on, more of it, probably will turn out to be serious literature. Mainstream writers like Mark Twain, Jonathan Swift, Jules Verne, H.G. Wells, Aldous Huxley have been associated with it. And some works which could be counted as serious literature has already been produced. George Orwell's *Nineteen Eighty Four* is one such example.

Isaac Asimov's "*Nightfall*" (I give the outline of this story in the notes)<sup>34</sup> is a much acclaimed story. Arthur C. Clarke's *2001:A Space Odyssey* has been praised as a work of great mystical power. A recent SF work which is philosophical, poetic and rich with satiric humour and social comment is Harlan Ellison's "*Repent Harlequin;*" *said the Ticktockman* from which I quoted earlier on.

Brian Aldiss thinks that science fiction works on a Philosophical level. "SF is not about reality" he says, "it's about sharpening our understanding of reality."<sup>35</sup>

And if science fiction does that, and does that well, we could not ask for much more.

**R.D. GUNARATNE**

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<sup>34</sup> "Nightfall" is a story set on the planet Lagash where at least one of six suns is always shining. But every 2050 years the planet goes into total darkness, according to the book of revelations and the scientists find this to be correct. When total darkness comes stars - thirty thousand of them-appear. People go panicky and mad with the darkness and the sight of the stars and they set fire to the cities and the whole civilization is destroyed thus every 2050 years.

<sup>35</sup> *PW*, p. 60.