Abstract

INTERFACE OF SCIENCE AND FICTION: A PARAMETRIC STUDY OF SELECTED INDIAN SCIENCE FICTION

Science Fiction, as a new genre, existed at the beginning of the twentieth century when an American radio engineer and magazine editor, Hugo Gernsback labeled the new genre as ‘Scientifiction’ in 1926, to characterize the contents of the magazine Amazing Stories. Later, the term was rechristened as Astounding Science Fiction in 1938. It was only in the 1950’s or after World War II that the label Science Fiction was applied to paperback novels, incorporating Science. Similarly in India Science Fiction writing began with Jagadananda Roy’s Shukra Bhraman (Travels to Moon) which appeared in Bengali in 1879. But some elements of Science Fiction could be seen in the Purans and the great epics, the Mahabharata and the Ramayana as well.

The researcher studied the coherence between the basic parameters of Science Fiction and utilization and presence of some of the dominant parameters of Science Fiction in the selected works of Indian Writers in English. In this thesis one novel each of four major novelists are analyzed in the light of important parameters, to assess their status as Science Fiction and their authors as writers of Science Fiction. All are living Indian writers of Science Fiction and their works project some social, cultural, traditional changes in India in particular and the world in general. The texts which are examined in the thesis are Jayant Narlikar’s The Return of Vaman (1990), Rimi B. Chatterjee’s Signal Red (2005), Anil Menon’s The Beast with Nine Billion Feet (2009) and Samit Basu’s Turbulence (2010). All these novels are set in Indian contexts exhibiting some dominant parameters.

The thesis brings out in separate chapters Narlikar’s urge to handle science and technology cautiously; Chatterjee’s concern for scientific development leading to
degradation of human values; Menon’s conflicting views of genetic engineering; and Basu’s supermen trying to establish a utopian world.

**Division of Thesis:**

The thesis is divided into six chapters comprising the following:

**Chapter I: Introductory- Genesis, Precursors, Definitions, Evolution, Types, Parameters of the Science Fiction**

At the beginning of this chapter, a brief survey of Science Fiction is conducted to trace the precursors of this new genre. It deals with theoretical framework comprising historical development of Science Fiction as literary genre, genealogies, major precursors, some important definitions of Science Fiction, development of Indian science Fiction in Indian Literary history and the parameters of Science Fiction. The genre of Science Fiction is seen to have been a fusion of several types of fictional works such as romance, novels of realism, novels of fantasy, works containing epical elements. The chapter also discusses some important definitions of Science fiction which gave writers of Science Fiction epical and dramatic plot-line with a scientific story. In this chapter a list of parameters, such as the following, has been prepared and examined:

I) **The concept of science used by the selected Indian writers of Science Fiction:** Basically it is assumed that science is universal. So writers reap the advantage of universality, naturally, by adopting various concepts of science in their writing.

II) **The Handling of Space and Time in Science Fiction:** One assumption is that science fiction writers face no limitations or boundaries in regard to handling time and space.

III) **The handling of characters with superpower, machineries, robots, space-voyages, space-ships combined with realism:** Some writers of Science Fiction make their heroes so powerful, so omniscient and gifted as to wonder whether the heroes are really gods in disguise. Men and women who appear in Science Fiction stories are merely representatives of humanity.
IV) The Narrative technique as benefitting in minimizing the distance between setting and events: It is observed in the study that the writers of Science Fiction have a narrator who can minimize the distance between setting and events, imaginary and real, improbable and probable, unbelievable and believable and impossible and possible by using, mostly, the omniscient narrative frame.

V) The presence of epical pattern, element of suspense, grandeur and impossible probabilities: There is evidence of the resemblance between the form of the epic and Science Fiction as far as their elements are concerned.

VI) Attitude of writers to Science and the Genre of Science Fiction: It is found in the study that in the view of the writers of Science Fiction, sociology and human relations should merge with modern sciences to facilitate writing of Science Fiction.

VII) The effectiveness with which the writer juxtaposes science and its use in present and the future: It is seen that Science Fiction shapes the future with the speculations or visions drawn by writers.

VIII) Interface of Science and Fiction: It is observed in the study that the elements of science and fiction intermingle to establish an organized body of knowledge or truth.

IX) Prophetic Vision and changes in social, political, cultural tradition of the universe: It is seen that Science Fiction writers anticipate changes in the social, political, cultural tradition of the universe.

X) Balance of realism and romance: It is studied that Science Fiction writers are most successful in balancing effectively realism and romance.

XI) Themes or Novum or Issues handled in Science Fiction: It is witnessed in the study that Science Fiction writers handle themes or issue like space voyage, rivalry of insect civilization with humanity, war tanks, man eating planets, collision with another star, super acceleration of life, man versus superman with superpower, germ development, future city, decline and fall of galactic empire and so on.
Chapter II: Jayant Narlikar- A Parametric Study of The Return of Vaman-plea for an ethical restraints on scientific excesses.

In this chapter Jayant Narlikar’s The Return of Vaman (1990) is analyzed in the light of the basic parameters of Science Fiction enumerated in chapter one. The core action in the text takes us to Gauribidnur where a team of scientists tries to uncover a plaque first and then a cube out of which Guru—the supercomputer, Vaman—a self replicating robot and the story of the Konad and the Monad civilizations emerge. Narlikar presents the need to basically arrive at new potentialities and purposes with the help of science. Narlikar presents the evolvement of Vaman in the existing world as similar to the evolvement of Konads in the time of the Monad civilization. In both the cases there is interlinking of time and space. Characters are mainly representative people of administration, culture, science and technology, archaeology and politics. They observe the law of virtue and vice. Narlikar uses poetic justice in presenting human and non-human characters. Narlikar interfaces science and fiction so as to describe Indian mythology and developments, prospects in computer technology through Indian scientists’ efforts in making the photonic supercomputer and replicate Vaman. Narlikar states that Vamans must be created cautiously so as to reduce human efforts and to do things which humans are incapable of. Computer scientists in contemporary times are working hard to make human robots and they do succeed. This is what Narlikar is most concerned with. As regards realism in handling characters, Narlikar treats characters realistically and humanly.

The parameters of Science Fiction are seen to have been observed in presenting scientific development for the betterment of society, in handling time and space suitable for the narration, deploying omniscient narrative structure leading to authenticity of events, balancing romance and realism in the form of depicting the contemporary scientific and technological development.

Chapter III: Rimi Chatterjee- A Parametric Study of Signal Red—a fervent appeal against use of science in war to secure power.

In this Chapter Rimi B. Catterjee’s Signal Red (2005) is analyzed in the light of basic parameters of Science Fiction. The action of the story is set in the year 2015 and the story revolves around the scientists working at the Centre of
Advanced Research and Development of Defense Science where many young Indian scientists as well as scholars are working on their various projects of making and creating innovative new weapons during a war to defend their nation. Dr Gopal Chandran is heading a group of twelve scientists working on nanotechnology of glass, esp., the Signal Red glass. A sequence of events happens at the Centre in chronological order of time. Chatterjee handles all the characters realistically in relation to creation of new futuristic technologies and with the implications of futuristic science and their influences on the mind and life of the characters. By doing this all her characters appear to be real, having socio-political connection with the existing scientific world of India. Chatterjee handles the setting in a realistic manner. A majority of events happen at the Centre. Chatterjee says that different societies in the different parts of the world are using science merely as a tool to establish hegemony and to defend their nations. Chatterjee raises some very relevant questions not only regarding the ideologies in the Indian context but also how the nation can escape the control of a new hegemonic order. Chatterjee predicts some phenomena of science which can be used in the present and the future for the sake of humanity. She calculates good and bad possibilities and potentialities in defending the nation’s policy in a war. The researcher believes that not all the parameters of Science Fiction are dominantly present in the text. The study reveals that Rimi B Chatterjee is a visionary in addressing the quintessential question what is it to be human under totalitarian forces. She offers important critical insights into the question to explore what it really means to be human in techno-cultural contexts. Unarguably, Indian Science Fiction is playing a significant role in interpreting contemporary attitudes and anxieties of human beings not only of India but also of the whole world over those agencies which control science for establishing power.

The parameters are present mainly in handling the characters, their action leading to innovate new scientific weapons for war, science and its use for the defence of the country, omniscient narrative structure that leads to communicating scientific ideas, presenting realistic setting and events in Signal Red. The researcher thinks that Chatterjee in her Science Fiction creates alternative visions for the human beings.
Chapter IV: Anil Menon- A Parametric Study of The Beast with Nine Billion Feet – A realistic vision of future of science in the social, political and cultural progress of India.

In this chapter Anil Menon’s The Beast with Nine Billion Feet (2009) is examined in regard to the basic parameters of Science Fiction. The present text is set in 2040, A.D. Pune. The story revolves round the concept of genetic engineering and the social and political conflict it generates. Vispala forms one pole of the conflict and Sivan the other. The sharp conflict between the two adults over the ethics of genetic engineering or technology emerges in the early part of the novel but the denouement of the novel reveals their personal history. Anil Menon warps time by setting the story in future time 2040, A.D. The novel was published in 2009. He sets the story in high-tech Pune city. In the book time shifts into the future and keeps readers there most of the time. Anil Menon presents the year 2040 where kids in Pune are depicted as working with liquid computers and illusion pods and travelling in intelligent cars. It is also a time in which technology dominates every aspects of life- houses talk to their inhabitants, cars fly, and reality is being reinvented in the mundane history class. Anil Menon uses the Illusion pods for time shift- in case of Adi’s desperate meeting with the posse. Anil Menon depicts intellectually advanced characters in the developed Indian society. They are habituated to using technological gadgets like flying car, house AI- artificial intelligence, visors for communications, lenses that can sense even perfume, mirror that can zoom in to specific areas and analyze skin texture and compose poetry and so on. Moreover characters are very much real. The fact that Ria and Francis are Nurthi or transhumans suit the character of Science Fiction. Anil Menon, thus, presents twins Ria and Francis as transhuman figures. Anil Menon’s characters are not bound by human limitations. The narrator adopts the third person point of view. But he alternates while telling Tara’s and Adi’s point of view. Both Tara and Adi are constant in their respective ideology of life. Both are presented as ‘opposites’ by the narrator. The book is set just 30 years away, a future one can easily imagine and touch.

Anil Menon is very optimistic about Indian Science Fiction and its emergence. He believes that Indian Science Fiction seems to have come out of the native experience into the inscrutable British Experience. Anil Menon predicts a
good future for both Indian Science Fiction and writers. It is mundane Science Fiction genre in which Menon forecasts scientific and technological development. Anil Menon also balances the element of romance and realism. Menon presents many details of life in 2040 Pune. Tara and her friends eat ice-cream at Appa Balwant Chowk, and visit Shaniwarwada, the old seat of the Peshwas. Though there is no mention of Misal Pav, Pitla Bhakri, Bhel, Sabudana Khichadi, Chitale Bandhu Bhakarwadi, but Idlis, Madras Coffee, Pizzas are very much in the hot list. The book realistically captures everyday noise, traffics, landmarks, and the people. Anil Menon depicts characters realistically human. Through Adi, Anil Menon probably handles the issue of migration. Anil Menon anticipates changes in social political, cultural, tradition of the Universe due to development in science and technology in the existing world.

The dominant parameters Anil Menon observes realism in handling the issue of genetic engineering, characters, setting and events, balancing romance and realism with regard to theme and characters. The narrator minimizes the distance between setting and events by shifting space from Pune. Anil Menon’s work fulfils the requirements of Science Fiction.

Chapter V: Samit Basu - A Parametric Study of Turbulence - depiction of war between superheroes and super villains and ultimate triumph of good.

In this chapter Samit Basu’s Turbulence (2010) is analyzed keeping in view the basic parameters of Science Fiction. The novel begins with the passengers of flight BA142 arriving in Delhi from London. A bunch of people who were on the London-to-Delhi flight, had a dream, and woke up with superpowers matching that dream. One character is Uzma, the gang’s ‘Super-Like-Me Girl’. Aman Sen is a communications demigod, able to control and manipulate all networks, including the internet. Vir, an Indian Air Force pilot, can now fly. Tia, a housewife from the troubled Indian north-east, can now live out all the lives she dreamt of by splitting into multiple bodies. Sundar, an innovative scientist, creates Time Machine. They are good superheroes. Samit Basu presents super villains as well. One of them is Jai, an indestructible one-man army with an old-fashioned goal – military conquest of the world. Namrata is a mind capable of
manipulating mobs, of driving humans and superhumans into an all-destroying frenzy, Sher can take the shape of a lion, Anima, a schoolgirl, can set on flame anybody, Tariq has the power of disappearing and wandering from place to place, Mukesh is a giant, Jeery can create silence, Vivek can play any role by morphing the body in a given background. Samit Basu tries to present essentially two very human questions- How would you feel if you actually got what you wanted and what would you do if you were given the power to change the world.

Parameters that are present in the novel are the use and application of science to change the world, the omniscient narrator's presentation of the action of the conflict between superheroes and supervillains by using various advanced weapons destroying various places of the world, balance of romance and realism in regard to the setting, theme, and characters.

Chapter VI: Conclusions: A Comparison of the Selected Works of Science Fiction and Concluding Remarks

This Chapter identifies the resemblances and differences among the four selected authors, all of whom are adjudged as Science Fiction writers in their observance of the parameters of Science Fiction.

All the four writers have shown similarities in respect of attitude to science, adaptation of epic-structure with grand subject matter and adventure, a combination of human or real and robotic or superpower characters, narrative technique, choice of locale, and vision of scientific development.

The differences among them are, briefly, pointed out as follows:

While Anil Menon and Samit Basu believe that science should be used as a tool of progress in uniting the world, Narlikar and Chatterjee think that a particular society should be conscious about the implications of scientific development.

All the four writers have tried to keep a balance between realism and romance, though in varying degrees. Narlikar, Menon and Chatterjee handle it in regard to theme, characters and setting whereas Basu handles it in regard to setting alone. Chatterjee is highly conscious about realistic setting.
As regards realism in handling characters, Narlikar, Chatterjee and Basu handle characters more realistically and making characters life-like. But Basu resorts to present the boundless and limitless abilities or powers of chracters.

All the four writers are entitled to be called the leading exponents of the genre of Science Fiction by virtue of their adherence to the parameters of Science Fiction in different ways, suiting their individual abilities and knowledge.

It is my humble contention that this thesis is a contribution in the area of Science Fiction as it deals with the foremost promoters of Indian Science Fiction. It is believed that the parameters designed in the thesis can be applied to all Science Fiction, not bound by time and space.

**Scope and Limitations of the Study**

The genre of Science Fiction had an evolvement in episodic form before the twentieth century. Now the episodes are filled into a structure and the readers, literary critics, and writers appear to be taking much interest. A lot of work still needs to be done in Indian Science Fiction writing in English. The study will help readers and writers of Science Fiction to assess the talent of individual writers of Indian Science Fiction.

Limitations of the topic comprise limited Indian Science Fiction writing in English, limited critical books on Indian Science Fiction writing in English, limited reference books, and the study material. Another limitation is that researchers working on Indian Science Fiction writing in English are few and far between.

The thesis argues that Science Fiction form is well suited for selected Indian authors because of their strict adherence of parameters. The texts analyzed are probed what it means for a text to be Science Fiction and what sciences to be fictionalsed by observing the basic parameters of Science Fiction.