Chapter II:

A Parametric Study of Jayant Narlikar’s *The Return of Vaman-Plea* for an ethical restraint on scientific excesses

2.1. Introduction

Indian Science Fiction is an emerging literary genre in the field of Indian literature. There are also many Indian writers writing Science Fiction in English. Anil Menon, Jayant Narlikar, Rimi Chatterjee, Manjula Padmanabhan, Kalpana Swaminathan, Samit Basu, Payal Dhar, Priya Sarukkai Chabria are making significant contribution to Indian Science fiction writing. But there are a few debatable questions like whether Indian Science Fiction exist on its own, its themes and concerns, whether it resembles or differs from the Science Fiction tradition in the west. One cannot answer fully at the moment, because of the limited data available. But the researcher intends to answer these questions by studying and applying the basic parameters of Science Fiction to the selected Indian Science Fiction texts which can be termed an integral part of the World Science Fiction.

2.1.1. Jayant Narlikar as a Writer of Science Fiction

When there is a talk of Indian Science Fiction, the name of Jayant Vishnu Narlikar naturally appears. He was born in Kolhapur on 19th July 1938. His father was a professor and later head of the Mathematics Department at Banaras University, Varanasi. Jayant Narlikar completed his Bachelor’s Degree in Science from the same university. Later he went to England and completed BA in Mathematics at Cambridge University in 1959. He received his Ph.D. in 1963 under the guidance of Fred Hoyle. His connection with India started with Tata Institute of Fundamental Research (TIFR) in Mumbai in 1972 when he accepted the job of professorship. Later the University Grant Commission (UGC) established Inter-University Center for Astronomy and Astrophysics (IIUCA) in Pune and Narlikar became the Founder Director of the same.


Narlikar’s most accepted works in English are The Return Of Vaman (1990), A Journey Through the Universe (2003), Tales of the Future (2005) and The Adventurer (2005). Though they are very few in number, they have made a significant impact in developing Indian Science Fiction.

Dr Jayant Narlikar wrote Science Fiction in Marathi, Hindi and English languages mainly to popularize science among the masses. His intention behind handling the form of Science Fiction is to inform his readers what is happening in the world of science. Very early in his life, Narlikar became a member of the Royal Astronautical Society. His PhD thesis comprised the research on principles of gravitation, gravitational pull between different celestial bodies, formation of the universe and others. He had also presented another view to the popular Big Bang theory. According to his theory the universe is not expanding but static. He had described it as ‘steady state’. This theory shed new light on the subject. With Fred Hoyle, he presented the famous Conformal Theory of Gravity, which became well-known all over the world. Narlikar and Hoyle worked on cosmology, including the steady state theory, theory of gravitation, electrodynamics, etc. In 1968, Cambridge University honored him with the Adam’s Award. Earlier, only three Indian scientists had received this prestigious award. They were Dr. Homi Bhabha (1944), Dr S Chandrashekhar (1948) and Dr Hujurbazar (1961). This award is given every two years in the memory of Dr J C Adams, astrophysicist and natural scientist.

2.1.2. A Brief Summary of Narlikar’s The Return of Vaman

The Return of Vaman is an admixture of science, astrology, mythology and replication on bureaucracy, international episonage and smuggling. The novel’s action revolves around three characters- Navin Chandra Pande, an archaeologist, Arul, a physicist and Dr Laxman, a computer scientist. One day Arul receives an unexpected call from Raghavan. Raghavan is the manager of Arul’s project of Gauribidnur. The reason behind calling is that Raghavan has found a container-like thing while digging at Gauribidnur. This makes Arul to leave for Gauribidnur as early as possible. Raghavan tells Arul that during their process of digging at 30 meters they found a
layer of metal. The metal is very hard and having a square-shape about three meters in size. Later they found a cube, 3 meters in size. There are many strange letters and figures all over the side of the cube. The script on the container is unidentifiable. Arul guesses that the container may have a time capsule containing records of what that civilisation achieved. On the container he finds a plaque. It has inscriptions red in the middle, black all round. The red letters are large and few. The text in black is long. The script is unidentifiable for both Arul and Raghavan. Arul finds the plaque light in weight and metallic. Meanwhile Navin receives the message of the Gauribidnur project. Along with him Laxman joins the project. Laxman is a PhD holder from MIT in Computer Software Department. Laxman thought that if the box turned out to contain technologically advanced relics of the past one can use it for the betterment of human progress.

Karl Shulz, a smuggler, lands in India from London. Arul and Laxman discuss the possibilities of opening the container. All electronic devices fail. Arul points out that the pictures outside have a function to serve. He points at the square which is being pulled out by two elephants on opposite side. Laxman refers to the two hemispheres of Magdeburg. Arul explains to the committee that in the 17th century a scientist Otto van Guericke joined two hemispheres and used horses to evacuate the air in the space in between. The air pressure on the hemispheres is so great that the two just would not be separated. Raghavan thought of using a needle and it worked. The air enters the top of the container as the needle is withdrawn. Laxman prepares report on the container/cube. Major Samant warns Laxman and Arul beware Navin as his profile is obscure.

In the second part Guru, the report of Laxman is read by all the members of the Committee. Raj Nath points out that CRAY is the only fastest and advanced Supercomputer of the time and the present report is a blueprint of the same, except that instead of electronics, it uses photonics. For those who left the container behind, it was a demonstrated reality. If they could reproduce that achievement they would have jumped across several steps in computer technology. Navin explains that they were scientifically and technologically advanced. All decide to make a computer out of the information on the container. When Arul is undecided on this account, Laxman explains to him that John von Neumann was a mathematical genius. His theory was that the motion of a machine—a robotic machine—can reproduce self. John von
Neumann believed and proved mathematically that such a machine can, in principle, exist. But the gap remains between mathematical construction and technological achievement.

Prof. Kirtikar thinks that the container does indicate clearly that the civilization had succeeded in making such robots. But such robots can be made only because of having photonic supercomputer. Arul, Laxman and Kirtikar discuss the possibilities of making such a self-reproducing, replicating robot. Laxman is happy to see that the things are working according to his expectations and how the new supercomputer is accepting his programmes. It takes only 59.52 seconds for the computer to complete the task as they thought it might take one hour. They inform Delhi headquarters immediately about their findings. Then the Container Committee meets in Delhi and discusses the possible opportunities for the betterment of India.

Navin stresses the importance of giving a name to this new photonic supercomputer. Many come with different names but Probir Ganguly’s name GURU is finally selected. UNI gives the news of Guru’s evolution. After returning from Delhi, Laxman accepts the challenge of making the von-Neumann Machine. Guru is a primary source to make it happen. Laxman starts making a robot with the help of Guru and the instructions written on the container. Arul tries to warn Laxman. Laxman argues with Arul that he is making Vaman, not an alien. Vaman is a name given by Laxman to the robot he is creating. Vaman in Indian Hindu Mythology was the fifth incarnation of God Vishnu when he manifested himself as the Dwarf God.

Laxman, Arul and Navin are very excited to experience the trial performance of one meter machine called Vaman. Guru is giving instructions to Vaman through microwaves. Vaman follows each and every instruction of Laxman. All are surprised to see that Vaman is learning from his mistakes. Then on the kidnapping of Urmila, Vaman expresses his plan. Vaman explains knowledge should not be confined to small community when it is for the betterment of whole race. To respond to Vaman’s objection Arul replies that Shulz, Yamamoto are materialistic, they are not after knowledge. They are after the power it brings. Vaman convinces Arul that he can reflect on and solve the problem of smuggling. The kidnapper intends to talk to Dr Laxmann. He demands the correct specifications of Guru’s CPU and Vaman in
exchange for Urmila. Vaman informs that he has set a transmitter which will help to locate where Urmila is.

Vaman is ready to go alone. Major Samant, the security-in-charge, arrests Navin because yellow sheet paper has Navin’s fingerprints. Vaman is supposed to take a package of false data to Shulz in a briefcase, but he takes the real version. Samant keeps Navin in the hall where the container has been stored after excavation.

Navin is surprised to read the information on the plaque. The plaque contains words in bold red letters in the central square and surrounded by a longer text in black script. When he finishes his reading he realizes the importance of communicating the information written on the plaque to Major Samant, Dr Arul and Dr Laxman. Navin explains that it is Vaman who is deceiving agency. He further informs how it is their biggest mistake to let Vaman go and ignore the plaque. Navin starts explaining that the plaque reveals the secret of the Monads. It is Vaman who plans Urmila’s kidnapping, and is behind conveying false message to his driver, and is also behind fabricating evidences against Navin. Navin points out how the Konads have no friends and how Vaman is desperate to get the ability to reproduce. This is the reason why Vaman takes the real version of Guru’s specimen in the briefcase. Arul explains how he plans to counter Vaman’s ego. He puts a ring incident. The ring is not an ordinary one but it is an explosive ring. Laxman agrees on condition that if he fails in convincing Vaman, then Arul should take the final step. Arul presses the button in his gadget. The aircraft breaks into pieces with a blinding flash and roar. That ends both Vaman and his future or the future of humanity. Thus Vaman does not return to destroy the world.

2.2. Science in The Return of Vaman

Many people have a strong conviction that knowledge of science is the best and probably the most standard form of knowledge more than the knowledge of philosophy and religion. It is debatable though. This belief certainly helps the writers of Science Fiction more than those of fiction which basically concerns with psychology, history, philosophy and religion. It is a fact that scientific knowledge too is based on some beliefs. To put it in other words, science is a system of beliefs and various angles used in science are thought structures to help seeing the world fictionally.
It is certainly true that science fiction deals predominantly with science by adopting the elements of both science and fiction. Some writers of Science Fiction adopt some elements of fiction in establishing order and some make experiments with them. The common thing about all works of Science Fiction is basically the phenomena of science or the probable changes in science. So it becomes mandatory for writers to highlight different branches of science, from Physics to Astronomy, from Computers to Thermodynamics, from Biology to Psychology and all major or minor, types and subtypes of science. In this regard Tom Molyan observes:

The Textual game depends on the author’s rhetorical ability to create a mode of discourse which allows her or him to exaggerate, intensify, and extend scientific, technological, and social conditions to their most extreme point while convincing the reader that everything which occurs in the fantasy world is feasible.  

Jayant Vishnu Narlikar in his book *The Return of Vaman* has presented science basically to arrive at new potentialities and a new purpose. The purpose is to select a good and safe future for the betterment of the society of the human race. Narlikar succeeds in presenting the close relationship between science fiction and imperialism like H.G.Wells. In this regard Ericka Hoagland and Reema Sarwal in their preface observe:

First it is worthwhile to consider science fiction’s relationship to imperialism, a relationship that has never been simple. Imperialist desire in the prime directive is coded through terms like ‘aid’ and ‘protect’, the larger goal being to encourage planets to willingly join the federation, and thus be drawn into the empire by choice, rather than force. 

The text presents different but important layers of basic science and technology in relation to contemporary issue of imperialism. The layers comprise computer, physics, astronomy, and biology. Dr Arul is a scientist working on the changes in the law of gravity. He selects Gauribidnur as a place for digging and testing the law of gravity. Dr Laxman, a famous scientist, code-breaker, joins Dr Arul as a joint project leader. Raghavan, who is the manager of the project Gauribidnur, informs Arul that during the process of digging they found a container along with a plaque, having the
dimension of three meters. It was cubical in shape. Both Raghavan and Arul are surprised to see various signs, pictures, and symbols on it. To interpret these strange signs and pictures, they call Dr Navin Chandre Pande from the Archaeology department, New Delhi, who is an expert. The interesting thing about Navin is that he has connections with the Underworld smuggling group of Karl Sulze and Company. But Navin is genuine and trustworthy in interpreting age-old things. Dr Laxman, Dr Arul, Dr Navin and Raghavan decide to open the container first with drills. All sorts of electric and hard instruments are used to open the container but all fail. Finally the position of the container is changed. Dr Arul tries to explain the science behind the opening of the container. He refers to the theory of Otto von Guericke’s two hemispheres which were joined in space or in air. The air pressure between the two was so great that it was impossible to separate them. Narlikar here tries to focus on the aspect of physics. To open such a cube it is necessary to pump air into the cube. Finally the container is opened by using a thin needle to pore a hole in it to admit air.

Navin makes it clear that the language inscribed on the Container had ‘radiocarbon’ in the letters. The container was seen to contain ‘Carbon 14’ which gradually decayed or got erased or exhausted. According to Navin, and based on scientific facts, it takes 5700 years for the decay of half the population of carbon. Arul pointed out that the civilization, to which the Container belonged, was far advanced in its knowledge of Physics, Chemistry, Biology and application of technology. The committee of experts agreed that their immediate need was to make a computer from the information, the contents, and pictures found in and on the Container. Professor Kirtikar introduces the Indian moral, mythical angel by suggesting caution because a highly superior past civilization became extinct due to greed, diplomacy and treachery.

The data collected from the Container it was evident that the civilization had succeeded in creating robots. The scientists agreed that in the contemporary age robots could be made only with the help of a photonic supercomputer. The committee agreed that the immediate purpose was to make a supercomputer. The scientists agreed to call the proposed computer ‘Guru’ and the robot ‘Vaman’ which would be man-controlled. Vaman received its name from the fifth incarnation of Vishnu.

Dr Navin made an oral demonstration about Vaman and Guru and if they successful in their efforts, it would be modern day’s great achievement. The Guru and
Vaman could go beyond the achievements of the Monad civilization to which the Container belonged. The scientists decided to apply Von Neumann’s theory of a machine which can replicate itself.

The novel introduces the conflict between true science and nescience or negative science, as the materialistic Shulz Yamamoto and company were planning to use Vaman for evil power to hold the earth in thrall.

The novel reveals that the Monads created replication called Konads, the latter becoming more powerful than the creators and this led to the extinction of the Monads. The lesson is that the scientists should not make Vaman as powerful and independent as Konads—that is the scientists must hold the remote control in their hands.

Dr Narlikar uses the fundamental knowledge of computer science and robot and creates a master plot for his work. Computer science and computer technology are means to the betterment of the world, which fact is keenly highlighted. He uses one scientific method which presents the knowledge of photonic computer as it is the emerging field of present science. Narlikar merely touches various fields of science namely, computer, physics, biology, and astronomy. A computer is a machine that performs several functions. The most refined computer is an abacus. In common denotative terms, computer is an electronic machine. There are two opposite views of computers and Narlikar has rightly put them through the creation and extinction of both Guru and Vaman. One notion is that the computer can do what it is built for to accomplish. Therefore it is not as creative as the human brain is.

The second view, opposing the first, is that inorganic matter needs to evolve life so that the humans can develop themselves as well as develop technology to create such computers. But there is a great danger in the second view that such developed ultimate computers could rule the Earth. The second view does make the humans insignificant, inefficient. In the text Narlikar presents the idea how the Monads, a much older civilization, created the Konads, the thinking but mechanical computers. The Konad computers had the ability to multiply their race. So the Konads assumed that they would serve their creators, the Monads, better by multiplying their population. But life of the Monads became more miserable after this happened. All the Konads went on a strike. So for the Monads only one choice was left. They saw
that now their life was going end within a few days. Food, energy, medicine, entertainment- everything that was needed for the Monads was stopped and it made the Monads totally helpless and miserable. The inaction of the Konads is an end of the Monads. But the Monads finally arranged to shut down all their power houses and sources because it was impossible for the Konads to live longer without power. Naturally they will cease to exist after the Monads.

The tale of the Monads focuses on the second view about the computers. It is a tale-within-a-tale in which Vaman is representing the Konads civilization. Narlikar ends the text keeping it open for discussion on the second view. The text is unique in highlighting history, science and vision of Earthian societies. The Monads created the Konads for the betterment of their race and their civilization. The Monads were highly advanced- scientifically and technologically-but saw their extinction due to the creation of the Konads.

The Konads were after all artificial, mechanical, robotic intelligence like aliens. The Konads understood their power and they decided to enlarge their population and rule their creators-the Monads. They succeeded in their attempt. Narlikar presents the view of the 1990’s that there will be production of such mechanical robots and computers on which human life will rest at a larger level.

One cannot deny that presently man is helpless without the aid of technology and science. For instance, to communicate, it is necessary to use technological devices like mobile, i-phone, tabs and so on. Without the help of such devices communication between people is not possible. In relation to this argument Roslynn Haynes states:

In *The War of the Worlds* (1898) the Martians’ fighting machines which invade the earth demonstrate, more obviously than the dynamo, the potential for cruelty and exploitation in the purely rationalistic mind but it is nevertheless stressed that the Martians are not ‘evil’, only amoral and highly efficient. Despite the final optimistic hope for a new world from the ruins, there is no effective counter-impression to that of confused, self-centred advance of an efficient, amoral, technological power.³
The novel *The Return of Vaman* presents precisely the same point of view that science could be destructive if not used cautiously. Science should be employed for the betterment of mankind. The scientists in the novel decide to make the computer Guru but unaware of its function, usefulness, and implication. In this regard Robert Scholes and Eric S. Rabkin in their book *Science Fiction* point out:

There are three types of computers-first is binary computer which performs arithmetical operations the, second is analog computer which performs and creates analog within itself and the third is self-programming computer which reacts to the results of its own actions in order to modify the way to act in the future. There is no such difference between man and self-programming machine or computers. ⁴

Thus Narlikar uses the knowledge of computer science to visualize an advanced society, the need to use advanced computers carefully for the well being of human species. Robert Scholes, in this regard, observes:

> Stories like Harlan Ellison’s *I Have No Mouth* (1967) present a world completely in the control of the computer and in which human life counts for nothing but human misery…Ever since *Frankenstein*, science fiction writers have been quick to spot the dangers incipient in science and technology. ⁵

Narlikar also touches upon the layer of physical branch of science. The story starts with an experiment under the law of gravitational force and the project takes off at Gauribidnur with a view to understand Physics at the deeper level. During digging, one cube-like container three meter in size having strange letters, signs, figures all over its sides, is discovered.

As it is pointed out in Chapter I, Newton’s first law states that every effect has a cause. A body remains at rest unless and until acted upon to move. Another law states that every action has an equal and opposite reaction. Newton’s law of gravitation, which is about how gravity works on Earth, forces Science Fiction writers like Narlikar to think of making experiments in the field of gravity. In the text Dr Arul is probably trying to find out the origin of the Earth, but he finds the container. The container informs about the past old civilization of the Monads and how it was technologically and scientifically advanced. Enakshi Chatterjee opines:
The Return of Vaman is an extremely readable novel. The discovery of a cube of an unknown metal at a Geo-physics experiment site plunges the novel into a sequence of fast paced events right from the start. While scientists try to decipher the coded message, an international gang of smugglers get busy to lay their hands on it. The characters, as one would expect, are all highly professional. Navin the archaeologist, Arul the Physicist, Laxman the artificial intelligence expert, Prof Kirtikar the prophet and Samant the security man are pitted against the smooth operator Pyarelal and the merciless Karl Shulz. Obviously the characters are drawn from live models and seem to acquire human dimensions unlike many western types which remain only cerebral. 6

Narlikar is positive about the use of science and technology. It seems that he wants that users of technology should be conscious in handling new machines, new devices and new gadgets as long as they should not harm humanity.

2.3. The Handling of Space and Time in The Return of Vaman

It is claimed that Science Fiction writers are very conscious of handling time and space. As mentioned earlier in chapter I writers set the stories either in time future or in time past with the help of the time capsule or time traveler or time machine. Sometimes the narrator takes the readers into time future or past and narrates the incidents that occur consequently or the whole story. In Narlikar’s The Return of Vaman the narrator shifts from present to past through Arul’s presentation of Monads. Narlikar uses the element of time and space effectively to present the story of two civilizations in relation to each other. The first civilization is that of finding the container and plaque by the Indian scientists and their efforts to create the first photonic supercomputer Guru and the artificial intelligence Vaman out of the information on the container. The second civilization presents the Monads of the past and how they were superior to the present one. But it is not the narrator but to some extent the container that takes the readers back, into the past. There are a number of pictures, signs, script on the container. Dr Navin from archaeology department, Dr Laxman and Dr Arul trace connection to the distant past Monadic Civilization which was much older than those of Egypt, Harappa -Mohenjo-Daro and even Vedas. It was older and technologically superior to the present one. Out of the knowledge, signs,
language on the container, Laxman, Arul and Navin create one super photonic computer Guru.

The container also has information about Von Neumann’s theory of replicating artificial intelligence like manly robotic machines. Laxman takes a lot of efforts and creates one small robot named Vaman. The name again takes us back to Indian mythology where Vaman is the fifth incarnation of God Vishnu. They give Vaman the ability to think and take his own decisions, but they do not give him the ability to replicate.

The majority of incidents take place at Gauribidnur. Time and space change accordingly. The Container Committee meets twice in Delhi in two different places. In Part II Chapter III Navin introduces the past civilization, the Monads which was 20000 years older than that of Egypt. Navin takes us back. He narrates how the Monads were the oldest civilization enjoying technologically advanced attributes. The Monads were living in different colonies not as a nation. Their culture transcends regional differences.

Navin’s presentation takes readers back into the past civilization and most importantly Darwin’s theoretical explanation of the origin of species; such as when was a human being born, which civilization was the oldest, how man has evolved, how many species enjoyed living on this blue planet. Such and many other questions are highlighted by Narlikar.

Narlikar strongly believes the possibility of there having been far more advanced civilizations on the Earth and they having become extinct mainly because of their greed. The Monads created the Konads- the artificial intelligence but with the passage of time the Konads due to their replicating ability increased in population and greed to rule their creators. The encounter between the Monads and the Konads perfectly matches with the encounter between Vaman and his creators or humans. In the first case the Monad civilization did not understand, realize and imagine the dangers of the artificial robotic Konads. Whereas, in the second case or in the creation of Vaman. Dr Arul and Prof. Kirtikar appear cautious about the dangers from Vaman. Dr Navin reads the plaque in time and Arul gifts the explosive ring to Vaman which works well enough to save the human race. In Narlikar’s story Vaman represents the Konads. Narlikar presents two similar stories interlinking each other in time and space.
The International smuggling scandal relating to Vaman’s existence is also highlighted. Narlikar presents the greed through the Monads and characters of Karl Shulz and Yamamoto. So it is the mastery of Narlikar to connect the plot of Monads with the present innovation of technology tangibly so as to interlink time and space in the novel.

2.4. The Handling of Characters with Superpower, Machineries, Robots, Space-Voyages, Space-Ships Combined with Realism in *The Return of Vaman*

It is a conviction that Science Fiction suffers from the lacuna of weak art of characterization. Many literary critics think that writers of Science Fiction do not observe the laws or principles laid down in Aristotle’s *Poetics*. But the genre of Science Fiction deals with the fate of the entire world or planet or race and therefore the writers involve characters who not only represent the universe or race but also are busy in saving the entire universe or race or planet in their encounter with another species or aliens. Secondly, Science Fiction writers believe that there should be no limit or boundaries set for human capacities and power. Therefore they create some megalomaniac characters. Thirdly, men and women appearing in the work are merely representatives of humanity though powerful or weak as they are. Therefore they assign tasks of saving their life as well as that of the entire race. Fourthly, characters are intellectually, psychologically, and physically presented as advanced. It is mainly because of the anticipation of a permanent condition. To put it in other words, Science Fiction writers set the story and characters either in the past or future time to depict the superior civilization in anticipating or assuming human development as remotely or immediately possible. Therefore they present characters in an advanced state or condition, intellectually, physically and technologically.

Narlikar’s *The Return of Vaman* has both human and mechanically and intellectually superior non-human characters. Like mainstream fiction Narlikar is successful in presenting characters. In the beginning, all characters revolve around the container and the plaque. Characters are mainly representative people of administration, culture, science and technology, archaeology and politics. They observe the law of virtue and vice. Narlikar employs the device of poetic justice perfectly so as to punish vice with nemesis.
All take interest in the discovery of the container while digging at Gauribidnur. Dr Arul is a scientist working on this project. The project is meant for testing the law of gravity. For this purpose he selects Gauribidnur as a place for his project. He finds the container and the plaque. There are many strange letters, symbols, signs, and pictures written on the container. He is an expert in computer programming, having worked at Bombay Institute of Science. But he is always cautious about anything that comes in his way. It is he who presents the theory of 17th century scientist Otto von Guericke who succeeded in joining the two hemispheres and then removing the air for opening the container. With the air inside the container two horses and elephants pulled in opposite directions but in vain. On Arul’s suggestion a thin needle is used to remove the air from the container. Then suddenly the container opens.

Arul plays a very important role in saving the entire race from Vaman. He notices that Laxman has become far more possessive in creating and operating Vaman. Laxman’s emotional personal involvement leads Vaman to think and to take his own decisions. Arul stops Laxman from going forward as Laxman is ready to give Vaman the ability to replicate himself. Arul later gifts a ring to Vaman. At the end of the novel the secret of Arul’s ring is uncovered. Arul actually saves mankind, human race from extinction through the ring. The ring turns out to be an explosive that destroys Vaman and his intention to conquer the planet. Thus Arul is like the savior in the novel. He fits into that category of characters of Science Fiction that save the entire race.

Dr Laxman is another important character in the novel. He is an intellectual and an independent person in regard to his work. He is a Ph.D. from MIT in Computer Software Development. Dr Gupta, Director General from Archaeology Department, suggested Dr Laxman’s name for the Gauribidnur project along with Navin Pande. Laxman is an expert. He is married to Urmila. He takes a lot of efforts in creating the first photonic supercomputer Guru. He is very happy for what he has done. He thinks of using Guru for the betterment of the human race. Later he reads the information on the container and starts working on creating a small human robot based on Von Neumann theory of Self Reproducing Automata. He succeeds in making such a replicate robot and names him Vaman. But on Arul’s suggestion he does not give Vaman the replicative power. He gives him the power to think, to take his own decisions, and learn from his own mistakes. He makes Vaman the fastest
learner. He develops emotional attachment with Vaman. He wants to give Vaman the power of reproducing. Arul stops him. It is only when Navin reads about the Monads and the Konads and their extinction, that Laxman understands the real intention of Vaman.

Dr Navin is an archaeologist, living in Delhi, with a passion for new imported cars and young girls. He is one of the members of the container committee and is also appointed as the joint project manager at Gauribidnur project. He has established connection with the smuggling agent Pyarelal in dealing with old relics and later in divulging the information on the container. He receives a message from Dr Gupta, Director General of Archeology Department, regarding the discovery of the container. Navin joins the committee and makes a presentation. During their second meeting Navin points out that the letters inscribed on the container contain Radiocarbon.

Navin opines that by measuring the abundance of radioactive species in archaeological relics it is possible to estimate their ages. Later he explains how people of the Monad civilization had five fingers like human beings and how they were scientifically and technologically advanced. Navin meets Pyarelal and agrees to provide information about Guru’s CPU, but Samant warns him in time. He gives Pyarelal and Shulz false data on Samant’s suggestion.

When Pyarelal is murdered Navin feels very sad. Navin is trapped in Vaman’s plan. Vaman arranges evidences against Navin for rescuing himself. Major Samant takes Navin under Police Custody and is aggressive while interrogating. He arrests Navin because the yellow sheet of paper has Navin’s fingerprints. He asks Navin why and when he started helping Shulz. Navin tells Samant that he had no role to play since he warned him. Then Samant shows Navin the yellow paper on which a map is drawn with a green pen which Navin used to have. The letters are in Navin’s handwriting and moreover the smell of perfume too is Navin’s. Navin rejects all these evidences and pleads that the smell is somebody’s intrigue. Meanwhile they find the briefcase on Navin’s table. Navin is imprisoned in a huge hall where the container was stored after excavation. As Navin tries to search a place for sleep, he notices a plaque on a lonely bench. He recalls how Dr Arul talked about the plaque. But all ignore the plaque and take interest only in the container. Navin is surprised to read the information on the plaque. He dials Samant and informs him how he has solved the
mystery. Navin is relieved to see Samant with Arul and Laxman. He shows them the plaque. Samant asks Navin how it has a connection with Urmila’s kidnapping.

Navin explains it is Vaman who is the deceiving agent. He further informs how it is their biggest mistake to let Vaman go and ignore the plaque. He reveals the secret of the Monads. The Monods created the Konads and the Konads went on strike. Navin informs that Vaman belongs to the Konad Civilization and he is interested only in developing his race. Navin points out how the Konads have no friends and how Vaman is desperate to get the ability to reproduce. Laxman and Arul give Vaman the ability to think, to take self decisions, but not the ability to reproduce. Now Vaman knows that he can get this ability in the company of Yamamoto and Shulz. This is the reason why Vaman takes the real version of Guru’s specimens in the briefcase. Thus Navin saves the entire human race from the probable invasion of Vaman’s race, the Konads.

Prof Kirtikar is the most respected and most senior scientist in India. He is the Director of ISGH. He is one of the members of the top level committee. A meeting is arranged at Technology Bhavan. He meets Raj Nath in his cabin before attending the meeting. During the second meeting Kirtikar explains the story of The Trojan Horse suggesting a moral in regard to the container. His view is that there is some mystery as to why the civilization of Monads that was so advanced is extinct today. When the meeting was over Arul requested Kirtikar to give him time for discussing some critical issues regarding the container. Kirtikar calls Arul and Laxman at INSA (Indian National Science Academy). Prof. Kirtikar adds the container does indicate clearly that the civilization had succeeded in making such robots. But such robots can be made only with the photonic supercomputer. Arul, Laxman and Kirtikar discuss the possibilities of making such self-reproducing, and replicating robots. Prof. Kirtikar takes a safe position and refers the tale of Bhasmasur from the Puranas. He exercises caution in the making of Vaman.

Major Samant belongs to the security department. He is in charge of Security at the Gauribidnur project. Major Samant calls Laxman for a meeting. Samant informs both Arul & Laxman to beware of Navin as his profile is obscure. Then Samant shows a photograph of the man named Karl Shulz, staying at the Royal Manor. Samant also shows the photograph of Pyarelal. He explains the connection between Pyarelal and
Karl. Samant is a very alert administrator. He takes every action to ensure the security of the container, Guru, Vaman and the scientists at Gauribidnur. He arrests Navin on finding the evidences against him. He takes immediate action when Navin informs him that the real deceiving agent is Vaman.

Urmila is the wife of Dr Laxman. Laxman calls Urmila to pack her things and reach Bangalore for several days’ stay as his project demands. Once she reaches Gauribidnur Urmila begins to speculate about the contents of the container. Urmila is the victim in the kidnapping plan. She is an innocent character in the novel like her husband.

Pyarelal is an Indian smuggler who establishes his connection with foreign smugglers like Karl Shulz. He convinces Navin about the importance of getting information about the container which is to be handed over to Karl. Navin gives false data to Pyarelal. When Pyarelal gives false data to Karl, he is murdered.

Karl Shulz is an international smuggler and killer. He changes his name while dealing with people. He takes the news about container very seriously. He wants to get Guru and Vaman for his material ends. He first contacts Pyarelal and then Navin for the PU (Processing Unit) of Guru and Vaman. He deals with Yamamoto, software industrialist at Silicon Valley. Later he lands in India to get the original version of Guru and Vaman. He murders Pyarelal for not fulfilling his terms and conditions. Finally he too is killed in the explosion along with Vaman.

Vaman is the only non-human artificial intelligence in the novel. Dr Laxman, Dr Arul and Dr Navin take a lot of efforts to make one super photonic computer Guru out of the information they collect from the container. The next step is to use Von Neumann theory of mathematics to create a human robot. Arul reads the thesis of John von Neumann which is on The Theory of Self-reproducing Automata. With the help of Guru, Laxman started making Vaman. Arul warns Laxman that he was actually making an alien in disguise. Thus Vaman is created. The name Vaman has a myth in India. Laxman and all are delighted to see how Vaman starts learning from his mistakes. Vaman starts taking his own decisions. Vaman is not happy with his existence at Science Centre. Vaman can think but he has not the ability to replicate. Therefore he plans to make his future. He understands his future is with Karl Shulz and Yamamoto. He complaints to Arul, Laxman for not giving him the ability to replicate. He suggests that they use him for the betterment of the human race. Finally
he confesses to Laxman, Arul, Navin and Samant about aiding in the kidnapping of Urmila as a ploy to arrest Karl Shulz.

It is Vaman who plans and executes the kidnapping to free himself from Laxman and company. He traps Navin in his intrigues. Navin comes to know that it is Vaman who is the deceiving agent when he reads the message on the plaque. He further informs how it is their biggest mistake to let Vaman go and ignore the plaque. Navin reveals the secret of the Monads’s extinction and how they created the Konads - artificial intelligence like Vaman. Vaman wants the power to replicate. Finally he meets his nemesis when Arul presses the gadget which ends Vaman and his intention of conquering the Earth. Shyamala A. Narayan in this regard says:

If 1988 could be considered the Year of the Novel in Indian English Literature, the two books deserve mention—they can be read with profit by adults and teenagers alike. The Return of Vaman by Jayant Narlikar, the eminent scientist, presents a very realistic picture of Indian society, especially of the unimaginative bureaucracy.

The Monad and the Konad civilizations are representatives of the existing world of Indian scientists and their creation of Guru and Vaman respectively. The Monads were a very scientifically, culturally, and technologically advanced civilization. Their scientists had managed to make artificial intelligence that was capable of doing anything the Monads desired. The life of Monads became more comfortable day by day. But they failed to see the danger ahead. The population of the Konads became more than their creators. Their inaction led to the end of the Monads. The Konads went on a strike and life of the Monads turned miserable. Thus the novel points out how the Monads suffered the nemesis for their greed. In this regard Raymond Williams in his article Science Fiction states:

There are several moderate stories, and a few good ones which consciously use the SF formula to find what are essentially new tribes, and new patterns of living. Some are dull, like Mr Ray Bradbury’s Martians- passionless blue balls- in The Fire Balloons. But the lithians, in Mr James Blish’s A Case of Conscience, are a beautifully imagined tribe, in spite of being erect eight foot reptiles.
Thus Narlikar goes into the past and visualizes the Monad civilization and creates a master plot involving each character to play a significant part.

2.5. Narrative Technique benefits in Minimizing the Distance between Setting and Events in *The Return of Vaman*

In Science Fiction the art of narration is highly important. Many writers introduce different techniques, and new ways of narration. Narrative technique creates an effect on the mind of readers namely that whatever they are reading is incredibly credible, improbably probable and implausibly plausible. Mostly it is the omniscient mode of narration that the writer uses. The narrator sets the story either in time future or past by using time capsule or time traveler. In Narlikar’s *The Return of Vaman* the narrator is omniscient and he creates suspense and presents events in order. He narrates the events in chronological order of time. He describes characters, incidents in relation to the plot. He minimizes the gap between time and setting, setting and events.

The novel starts with the information about the flight from London to Delhi in which two passengers transfer something to each other. The second takes readers to Bombay and Bangalore. Arul receives a call from Raghvan who informs him that he has found a container while digging at Gauribidnur project. So in the first two chapters the narrator narrates two important incidents- one is of the flight and second is of the container. The narrator narrates events one by one by shifting the places. But all incidents are related to the container, to creation of Guru and the making of Vaman out of Guru. Throughout the story the narrator creates suspense. He not only presents facts but also comments on characters and their intention of action.

One important part of the structure of the text is that titles of all chapters excluding the last bear the definite article. So it creates the sense of plausibility, assertiveness, definiteness as far as the narration is concerned. Narlikar makes it very clear to readers that whatever the narrator is telling us is a fact. He is more ontological in his sense of narration. The text is not only a narration of past Monadic civilization and its extinction in connection with the future, but also thoughtful examination of the present and the narrator succeeds in showing how the fictional world works in relation to the present or the real world. The narrator mentions the names of locations where
the incidents are occurring, sometimes with date and time as well. For example the change of place of the container committee meeting is mentioned clearly. The first meeting is held at Technology Bhavan New Delhi and the second at Shastri Bhavan New Delhi and the third at Science Centre Bangalore.

The role of the narrator suddenly shifts when Navin finds the plaque at the end of the novel. He understands the reason for the Monads’ extinction and becomes the narrator and tells the story of the Monads and the Konads to Arul, Laxman and Major Samant. Therefore we can see the second voice or the-story-within-the-story. With regard to the container, the narrator moves forward and back in describing the events. The international smuggling racket is also interlinked with this tale where the narrator meets Karl Shulz and Chusiro Yamamoto at Silicon Valley, the software Capital of California. They have a deal in exchanging the module of super photonic computer Guru and replicate the robot Vaman. Then narrator narrates the happenings relating to the container in Gauribidnur.

Narlikar uses straightforward and simple narrative technique in telling the story. He is highly conscious that the role of the narrator is to tell events so smoothly that the readers are not confused on their mind.

2.6. The Presence of Epical Pattern, Element of Suspense, Grandeur and Impossible Probabilities and Improbable Possibilities in *The Return of Vaman*

Narlikar’s *The Return of Vaman* does possess some dominant epical elements. The first is handling of theme or subject. Epic deals with a lofty and noble subject. Similarly, the text deals with the human race or the entire species and its escape from the artificial replicated intelligence. Vaman is such an intelligence created by the Indian scientists with the help of information on the container. By using Von Neummann theory of self reproducing automata, Dr Laxman, Dr Arul and Dr Navin make the first Guru-supercomputer and Vaman. They discuss with Prof. Kirtikar about giving Vaman the ability of reproducing itself. They visualize the possible positive effects and benefits when Vaman gets power. Arul and Kirtikar anticipate some dangers if Vaman possesses the ability of copying himself. Dr Arul thought of what would happen if he finds the interfering agency in replicating himself to be none
other than man. Therefore to take precaution he gives him a ring which contains an explosive matter.

The second epical element is that of adventure. The text presents psychological adventure and journey of the quest for knowledge of Indian scientists. The container plays a vital role in describing the journey of the past civilization, the Monads and the Konads. The fall and decline of the Monads is also adventurous.

The third epical element is handling of characters. Some are human figures and some are mechanical robotic intelligences. Vaman and the Konads belong to the second group. Vaman thinks fast, learns from his mistakes, and he is superior in knowledge to man. He could have been Narlikar’s supernatural character who represents the Konads civilization. Vaman is a machine who wants to get the ability to reproduce. Laxman, Arul and Prof Kirtikar do not give Vaman the reproducing ability. Therefore he plans to separate from Laxman and sets a plot of his own rescue from the humans. He convinces his evil companions to let Urmila be kidnapped. In her kidnapping he sees his future and power to replicate.

Suspense is sustained throughout the novel. Finding of the container, symbols, signs written on the container and plaque, creation of Guru and Vaman, Arul’s gifting a ring to Vaman, Navin’s uncovering of the real reason of Monads extinction, the Konads and Vaman’s intention all of which create suspense. Suspense is generated in finding what is inside the container and how to open the container. Finally Arul comes with Otto Van Guericke’s theory of two opposite ellipses and easily opens it by pricking with a small thin needle. Navin reveals the tale of the Monads and their extinction when he finds the plaque. At the end of the novel Navin comes to know this fact. Vaman is a representative of the Konads who were selfish and greedy in developing their own race like Vaman. Narlikar argues the case that for the betterment of humanity or world or human race, the robots must rule the world or that in the modern age computers or robots or machines are ruling the humans. In the battle between them why not we accept the inefficiency and dependency of man over machine.

Like the epic, Narlikar incorporates the element of myth in the novel. The title itself refers to Indian mythological tale and character of Vaman. Hindu mythology
talks about reincarnation of gods. Narlikar incorporates the myth of the end of King Bali to suggest the end and destruction of Vaman which is inevitable for the Earth to prosper. God Vishnu has ten reincarnations, nine have already taken birth. Vaman was his fifth. The tenth and his last incarnation Kalki, is supposed to take birth after 84 thousand years. With him, the cycle of Universe is predicted to end. The story for the reincarnation is that demon King Bali conquered the Earth, Heavens and banished Indra from there. Vamana freed the Earth from the terror of demon Bali and restored Indra's authority over the heavens. God Vishnu disguised as a short Brahmin known as Vamana requested three steps of land from King Bali to live in. He promised to fulfill his wish. Vamana then grew so huge that he covered from heaven to earth, earth to lower worlds in two simple steps. King Bali unable to fulfill the promise of three steps of land of Vamana offered his head for the third step. Vamana placed his foot on King Bali's head and gave him immortality for his goodwill. The end of Vaman in the novel means saviour of the Earth and humanity. Narlikar uses Indian mythology for his thematic purpose. Another reference is to Greek mythology. Prof Kirtikar cites the story of the Trojan horse during the second meeting of the container committee. The third reference is the story of Bhasmasur when Arul and Laxman meet Kirtikar before making Vaman. The fourth reference is to the character of Laxman and Urmila. Like the mythological characters both Laxman and Urmila are presented in the novel. Enakshi Chatterjee thinks that:

The plot is worked out with almost mathematical precision. The very strong story element makes it almost like a straightforward thriller but the structure reveals a creative mind which has taken everything into account. The perfectly constructed story is not just an example of technical brilliance. The novel proceeds on its own inexorable logic.  

Like the epic, Narlikar observes the law of poetic justice at the end of the novel. Good is rewarded and vice is punished. The Konads punish the Monads for their greed and meet with their own nemesis. Similarly Pyarelal, Shulz and Vaman get punishment in the form of death for keeping material interest above social well being.
2.7. Writer’s Attitude to Science and the Genre of Science Fiction

The basic purpose of fiction writers is to make society a better place to live. Each work of art teaches something to readers. According to the critic Sir Philip Sidney the purpose of a work of art is to teach and delight. What makes writers of Science Fiction to write Science Fiction is the conviction that science can be learnt or taught better through fiction. And fiction is the universal medium for making it happen. Therefore science can be better universalized through the art of fiction. Another view is that science like fiction demands logic, rationale, facts, experiments, results, principle of cause and effect which attract the writers to write Science Fiction. The third view is that the very nature of fiction and science is universal; so by writing Science Fiction the writer does enjoy universality naturally. Narlikar believes in all these three views. Being a scientist Narlikar is very positive about science. He wants to popularize science among people and believes that fiction is the suitable medium to achieve this purpose. In his text *The Return of Vaman* Narlikar presents knowledge of Indian mythology and developments, prospects in computer technology through Indian scientists’ efforts in making the photonic supercomputer and replicate Vaman with the help of the information they get on the container. Narlikar is not recognized as a genuine English writer of science fiction. As we know he is more a famous scientist than a writer of Science Fiction. He has written a lot of science fiction in the Marathi language which is his mother tongue for the purpose of popularizing science among the people of Maharashtra. Enakshi Chatterjee observes about Narlikar’s art of handling the genre:

This attempt at fiction from an eminent scientist is in many ways a good indication. It shows that our best scientific minds are showing a healthy respect for the average readers. It also shows the scientist in the challenging role of a social reformer, presenting a world view which is determined strictly by reason and not by magic or the supernatural. 10

The author, being a scientist, desires to explain science by avoiding complicated factors. But his style of writing emphasizes the technique of presenting events and places in realistic manner. In this regard G.Doherty remarks:
In complete contrast there are those writers of SF who, far from allowing their fancy full flight, confine themselves to the prediction and description of developments likely in the near future. They write in a very realistic manner and describe their scenes in accurate detail which can be worked up, for the most part from a knowledge of present day techniques.\textsuperscript{11}

2.8. Juxtaposition of Science and its Use in the Present and the Future

The world today is the world of science and technology. Science has become an integral or inseparable part of man’s life. Use of computers, laptops, I phones, tablets is increasing day by day to perform a lot of personal, impersonal, formal, informal, and administrative work of various sectors of society.

Narlikar emphasizes the use of science and the future of computer technology in the text. He envisages the birth of supercomputer and presents the photonic supercomputer in his text \textit{The Return of Vaman} published in 1990 and which is very much a reality in 2015. The second view is that the human robot can perform any kind of task given to it by its creators. Vaman is one such machine that can think independently and can take independent decisions. Moreover he is a fast learner from his mistakes. Vaman thus is the wish of the present computer scientists and they are successful in making it a reality.

Whatever Narlikar has predicted about creation of Guru and Vaman will be a present or probably a future reality. The world of computer technology is highly innovative capturing both mind and heart. Since the journey of man from birth to death, science has played a vital role.

Narlikar believes that science is for the betterment of human life. In the text Indian scientists are really working hard to make the first photonic computer and a robot that replicates itself. In the present, this is very much a reality. Scientists from all over the blue planet are working hard to make it a reality for human comfort. On the other hand, the writer informs how there is a need to handle technology with great care.

The text does discuss the probable dangers of the excessive use of artificial robots and how it may lead to a miserable state of human beings. Vaman needs to be used carefully. Prof Kirtikar and Dr Arul do voice this concern and take precaution at
the right moment in Vaman’s development and journey of self existence. Vaman very interestingly states that more Vamans must be created to reduce human efforts and to do things which humans are incapable of.

2.9. Interface between Science and Fiction

As it is discussed in chapter I there is an interface between science and fiction. To put it in other words, there is a resemblance between the two entities, science and fiction, in terms of their elements, functions, characteristics, purpose and mechanism. The first point is vision. Vision is to take efforts in making the present condition of man into a utopian state by removing drawbacks and weaknesses. In the text Narlikar visualizes the possibility of having human robots that will reduce unnecessary and unproductive work of man. Vaman’s existence is based on such a possibility. Narlikar uses both science and imagination to shape and visualize the future of mankind.

The second point is that characters are involved in making the earth a better place to live. In fiction characters have intentions either good or bad. In science too characters do a lot of experiments in keeping intention to do good for a particular society and to do bad for another society. In the text when Indian scientists succeed in making the human robot, Vaman criticizes Indians for holding a narrow view of using him for only Indians. Arul explains how Shulz and Yamamoto possess materliastic motives in getting Guru and Vaman. Some characters possess extraordinary power or potentiality. In the text the Konads and Vaman possess such a power. They represent man’s desire for power.

There is an existence of organized body of knowledge or truth both in science and fiction. In the text creation and use of human robot is demonstrated as evidence of knowledge in contemporary times. Both science and fiction aim that man should be energetic, humble, constructive and critical in action. In the text Narlikar presents man as energetic, humble, constructive and critical in action. Narlikar’s view is that the application of scientific knowledge for the betterment and improvement of material condition of life is very vivid. Results are reliable. Logic and imagination go together in shaping science in the book.

Another point of similarity is search for truth or realism. Both in science and fiction this element is dominant. Narlikar uses it effectively. He uses lifelike characters and gives them names from Indian mythology. In a way he does make
fusion of science and fiction in naming supercomputer and robotic machine Guru and Vaman respectively. Moreover he is concerned with truth. Scientific progress is presented in the form of Vaman and Guru. Another truth is innate greed presented in the form of the Monad civilization. Greed leads to their nemesis i.e. death as the Monad scientists succeed in making konads with artificial intelligence and who had the reproducing ability. Later with the passage of time the Konads multiplied their population while serving the Monads. The Monads were unaware of the fact that their greed one day will demolish them. This happens when the Konads go on strike. The strike of the Konads leads to end of the Monads civilization. On the contrary Indian scientists are aware of dangers of Vaman and his intention. Arul and Prof Kirtikar make arrangements for their race to be not a victim of Vaman.

Romance or adventure is another aspect to look for in the text. Narlikar presents this element through finding the container and the plaque. Surprisingly Indian scientists and government representatives make it a secret mission. An archaeologist is called for identifying the strange codes, pictures, symbols written on the container. All assume that the container does inform about a very old and advanced civilization of the blue planet. Therefore it becomes inevitable to open the container. Adventure and suspense are interwoven in opening the container. Arul’s suggestion of using Otto Von Guericke’s theory helps to open the container. An expert container committee is formed and Dr Laxman, Dr Arul and Dr Navin are asked to prepare a report on the findings about of the container. It is really exciting for Laxman. By applying the theory of the famous mathematician Von Neumann’s Reproducing Machine, the committee feels that a machine –a robot- can reproduce itself and in principle it exists. But a gap remains between mathematical construction and technological achievability. Finally Arul, Laxman, and Navin with the help of Kirtikar make one super photonic computer Guru out of the information provided by the container. And later Laxman makes Vaman – a-tiny robot- artificial intelligence with the help of Guru. It is certainly a good achievement of Indian scientists for making Guru first and then Vaman.

The real adventure starts when Vaman does not possess the ability to reproduce. He has only the ability to think. He does every kind of work that Laxman orders him to do. Vaman plans of rescuing himself from the committee to exist independently and achieve the replicating ability. He convinces Arul, Laxman, Navin, Samant to let Urmila be kidnapped by Karl Shulz. It is actually Vaman’s plan of
going with Shulz for his future. But Navin’s reading of the plaque saves the entire universe from extinction. The real romance is in the last part of the text. Vaman’s plan of kidnapping Urmila, the arrest and confinement of Navin in the storehouse, finding of the plaque by Navin, Navin’s reading about the plaque the Konads and the Monads and Vaman turning out to be a deceiving agency.

Both in fiction and science suspense is a vital element which generates curiosity amongst the actors concerned. Science deals with a lot of experiments and results. But the experiments are full of suspense. Similarly, in fiction suspense is generated through characters’s action and intention which lead to results. In the text the container and the plaque generate a lot of suspense, from the time of finding it to its opening, Dr Arul, Dr Laxman, Navin and some administrative members of Indian politics are curious to know the matter inside the container. Arul removes the suspense when he suggests applying the theory of Otto Van Guericke to open the container. The container does contain information of past civilizations but in a fabricated form.

Navin uses his knowledge of archaeology and states that the civilization that existed in the past was much older than Harappa and Mohenjo-Daro. It was called the Monad civilization and it was technologically more advanced a civilization than the present. But Urmila’s doubt so as to why the Monads who were so advanced become extinct creates more suspense. With the help of information on the container the Indian scientists successfully create Guru, the first photonic supercomputer. Later suspense is generated in creating Vaman out of Guru. Arul’s gift of a ring to Vaman, Vaman’s plan of going with Karl Shulz to carve his future through the drama of kidnapping Urmila, evidences against Navin, Navin’s confinement in the storehouse, the finding of the plaque and at the end the plaque ends all suspense. Vaman turns out to be a deceiving agent and it was for the replicating power that he deceives his creator Laxman. Narlikar handles suspense like a true Science Fiction writer.

Science Fiction anticipates or predicts some probable changes in cultural, social, and political tradition of the entire human race. Like fiction, science fiction also presents an idealized world of humans. Both science and fiction speculate over desirable results for the betterment of human life. Narlikar like a true Science Fiction writer anticipates changes in human behavior with the use of computer technology. He predicts both positive and negative results of the excessive use of technology, through the story of the Monad civilization and their extinction. In anticipating the
change realistically, Narlikar sets the story in India where scientists are working hard to test the law of gravity. In the process they find the container and the plaque which inform about past advanced Monadic civilization which became extinct due to the creation of the replicating robots called the Konads. The Konads become more in number and taking advantage of their population and replicating potential, they decimated the monads by way of nemesis for their greed. The second prediction is that one should use technology to ensure security of mankind, and for making the Earth a better place to live.

2.10. Balance between Romance and Realism

H. G. Wells mingled the genre of romance with Science Fiction. But romance originally referred to Sir Thomas Malory’s tales of King Arthur’s Knights. On the other hand, realism stands for two things principally-one accuracy of description and second is rejection of idealism, escapism and romance. As a literary trend it is associated with 19th century novel depicting the problems of common people. Science Fiction combines both the element of romance and realism by presenting adventures useful for the betterment of society.

It is assumed that science studies facts, results etc. in relation to real human life. Fiction studies adventure. Science Fiction combines these two and brings about a balance between the two. In the text The Return of Vaman Narlikar brings together the elements of romance and realism. In the creation of Vaman the element of adventure is dominant. Moreover the text highlights the journey of Indian scientists Laxman, Arul and Navin in analyzing the content of the container. Somehow they succeed in creating Guru. With the help of Guru Laxman makes Vaman, the human robot. It is also adventurous to notice how Vaman for the sake of replicating himself for power tries to escape from the company of his creators. He desires to make many Vamans like the Konads. Both the Konads and Vaman and their existence is highly adventurous and appears to be real. The underlying reality presented in the existence of the Konads and Vaman is that man cannot live without technology. Man’s condition will be miserable in social life if he avoids using science and technology. It has become an inseparable part in human life.
The setting, in particular, is the Indian metro cities Delhi, Bangalore, Bombay. But much of the action takes place in Gauribidnur. The places mentioned in the text really exist today. Thus the element of realism about the setting is attained. The story of the Monads reveals how machine rules the world. The problem of population is also discussed through the dominance of Konads over the Monads.

2.11. Prophetic Vision and Changes in Social, Political, Cultural and Traditional aspects of the Universe.

As it is mentioned in Chapter 1.4.10 prophetic vision means that some change needs to happen in the present political, social, economical, geographical, scientific, technological, religious, cultural tradition of the universe or the entire race. The present text, Narlikar’s *The Return of Vaman* prophecizes a technological revolution which will introduce artificial intelligence and will serve as the driving force of computer technology.

In post colonial literature it is this dominant element where the writer is set to change educational, political, and cultural tradition of the community which has experienced imperialism and its adverse effects. Narlikar is concerned with the entire community or human race, not a small group or community. In this case Donald Wollheim opinion is very relevant. He states:

> Read through the blurbs of a hundred paperback SF books and count how many have at stake not just the hero’s life but a cause of planetary vastness. Science Fiction writers are not just universe makers, they are also universe savers.¹²

The Konads were the aspiration of the Monads and their scientists. Similarly Guru and Vaman are the aspirations of Indian scientists representing the human race. Laxman did not visualize the danger of having a self-replicating robot Vaman but Arul and Kirtikar read the dangers of such a replicating machine. Like a true Science Fiction writer, Narlikar predicts the changes in computer technology both in their positive and negative, utopian and dystopian modes by presenting the tale of the Monads and the Konads.
2.12. Themes or Novum or Issues handled in Science Fiction

Science Fiction deals with science in general and some branches of science in particular. While handling the issues relating to science and technology, the writers are particular in setting their tale in time present or future so as to predict some scientific, cultural, social or even political changes in human system. The writers present in anticipation some of the great changes to their species or planet or entire universe. The universe did start: how, when, why, where are just the speculative themes for Science Fiction. Narlikar tries to handle one of such questions in narrating the tale of the Monads and their extinction. Though he spends very few sentences in telling the tale of the Monads yet the tale has different layers of themes.

There are two worlds to which the text refers. First is about the finding of the container, then creation of the first photonic supercomputer Guru out of the container and producing Vaman an artificial replicate intelligence. The second world is of the Monads and their nemesis, how the advanced civilization becomes extinct due to greed and how that civilization has been successful in making several artificial human robots. The major theme of invasion of one colony over another is highlighted through the presentation of the Monads and the Konads. Navin in chapter I of part III records the details of the Monad civilization and how the Monads were technologically and scientifically superior to the present human race. At that time the question of Urmila raises serious thinking. Her question was regarding the reason of Monadic extinction. Many thought it could have been due to natural catastrophe or natural causes. The answer is found in the penultimate chapter of the book, the documents, when Navin reads the information written on the plaque which he finds in the storeroom hall.

Navin informs Arul, Samant, and Laxman that it is the Konads who were responsible for wiping the Monads out of existence and Vaman is just the representative of the Konads. The Monad scientists were successful in creating artificial intelligence to serve their need. They utilized the ability to replicate as per their need. The Konads outnumbered the Monads. The Monads created the Konads for the purpose of betterment of their life but by doing this they failed to recognize the dangers of overpopulation of the Konads. Then the inaction of the Konads led to the miserable life of the Monads. It was too late for the Monads to fight against konads as their number was half of the Konads. Therefore within ten days they became extinct.
They made the time capsule container and the plaque on which they warned the coming civilization not to commit the mistake that they did, namely to be greedy. All the scientists and others understand Vaman’s intention. Vaman wanted to go with Shulz and Yamamoto solely because of the greed of possessing the power of reproducing himself. He sees his future in Shulz. To look at this work as Science Fiction we must accept that there existed many past civilizations capable of supporting human life in a more advanced or depraved form than the present one. Since there is a strong belief that human life exists in our Galaxy on a different planet; one galaxy itself is having the possibility of over 1000000 planets like Earth.

The second view or Novum is the photonic computer and replicating robot. Out of the information from the container, Dr Arul, Dr Navin, Dr Laxman made one photonic computer. As it is mentioned in the text CRAY is the only Supercomputer which is made of electrons. Indian scientists have the wonderful opportunity to make the first photonic computer. They succeed in making the first photonic computer called Guru. The next task is to make a self-replicating machine- human robot based on the genius mathematician Von Neumann’s theory of Self Reproducing Automata. When Arul read the thesis of Von Neumann, he thought about the consequences of a reproducing machine which may invade the life of humans by reproducing humans. But Laxman has already started making such a robot and names it Vaman. Here is the perfect combination of science and mythology. Narlikar uses Indian mythology in allotting names to the characters. Laxman, his wife Urmila, and Vaman are such examples.

The third idea is that of the tussle between man and machine. Narlikar published the text in the 1990’s and during that time science had evolved and had been utilized for reducing unnecessary work of men. Powerful machines, computers, robots were used to complete the work of men efficiently. In the text the Konad civilization and Vaman represent human robotic intelligence and the Monads, while Arul, Laxman, Navin and others represent the human world. The rivalry between the Monads and the Konads is the fight between man and machine. Enakshi Chatterjee states:

If we look at the western tradition we find a lot of interesting experimentations with form. The possibilities are endless. Narlikar however has chosen a conservative approach. It is prudent to be
cautious. Perhaps the time to evolve rules and build conventions, so that later generation of Science Fiction writers can do away with them altogether. 13

The researcher has tried to illustrate how Narlikar, like a true Science Fiction writer, handles the subject of advanced computer technology by presenting Von Neumann’s theory of Self Replicate Automata which is a practical possibility.

2.13. Conclusion

Narlikar in The Return of Vaman is highly concerned with the element of plot-story. It is seen in the study that Narlikar observes the basic parameters of the form in various degrees. He is realistic in handling characters, setting and science in the text. Though he does not write like the other prolific writers of science fiction, he has remarkably woven myth into the plot. It seems that Narlikar is busy in fictionalizing science on an argument that science needs to be utilized for the betterment of humanity not for the destruction of humanity.
2.14. References


