ASIMOV AS A SOCIAL CRITIC: A SELECT STUDY OF HIS SCIENCE FICTION

Abstract

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Chapter I: Introduction

Science fiction is defined as "a narrative (usually in prose) of short story, *novella* or novel length." (Cuddon 791). It deals with an array of varied topics from space and time travel to future worlds of utopian or dystopian visions. It can also be about alien invasions, geological changes, groundbreaking inventions and interplanetary warfare. "They are often fantastic though they may be rooted in reality. They stretch the imagination." (ibid) Because of this highly imaginative character, science fiction is not considered as serious art and has for many decades been stigmatized as a genre literature that adults need not bother with. Brian Aldiss, the godfather of British science fiction, said in its defense that

> ... we are living in a SF scenario. A collapsing environment, a hyper-connected world, suicide bombers, perpetual surveillance, the discovery of other solar systems, children drugged with behaviour controllers -- its all coming true at last. In such a climate, it is the conventionally literary that is threatened, and science fiction comes into its own as the most hardcore realism. (qtd. in Appleyard 1)

Science fiction has long been used as a tool for social commentary and satire. The alternative worlds that are created, whether it be a utopia or a dystopia, serve as a commentary on the present social

conditions. The best science fiction novels such as Aldous Huxley's *Brave New World,* George Orwell's *1984* and H.G. Wells' *The Time Machine,* show the possible consequences of present actions and have had numerous essays written on their social implications. Counted among these prominent authors is a recent, more contemporary author whose comprehensive body and quality of work has earned him much critical and commercial fame.

Isaac Asimov was born on 2 January 1920 in Petrochi, Russia. His family migrated to the United States in 1923 and settled in Brooklyn, New York. He studied at Columbia University and graduated from there in 1941 with a Master's degree in Chemistry. In 1942 he moved to Philadelphia to work at a naval yard for the 2nd World War and entered the Army in 1945. He was discharged from the army in July 1946 and settled in West Newton, Massachusetts. After the war and much turmoil in his personal life, Asimov became an instructor at the Boston University of Medicine and was promoted to Assistant Professor in December 1951. On 1 July 1958, he gave up his teaching job to become a writer. By the time of his death on 6 April 1992, he had written and published close to 500 books.

Asimov's vivid imagination coupled with his rich and varied life experiences, inspired him to write stories that were highly influential and

very popular. Among these, the *Foundation Trilogy* and *The Gods Themselves* have won major awards such as the Nebula Award for Best Novel in 1972; Hugo Award for Best Novel and Locus Award for Best Science Fiction Novel in 1973. The *Foundation Series* which includes the original *Foundation Trilogy* along with two prequels and two sequels was awarded the prestigious one-time Hugo Award for Best All Time Series in 1966, beating several other science fiction and fantasy series including J.R.R. Tolkien's *The Lord of the Rings*.

From tyrants and world wars to philosophical arguments on ethics, science, history and humanity, the original *Foundation Trilogy*, along with other selected volumes that form part of the *Foundation Series*, tackle various social issues and problems which are quite pertinent to the present world. This chapter examines Asimov as a science fiction writer and social critic together with some of the more prominent science fiction authors such as H.G. Wells, Aldous Huxley and George Orwell. This is done with the view to projecting science fiction as a form of social criticism. William Wilson has been credited with being the first to use the term 'science fiction' in his 1851 book, *A Little Earnest Book upon a Great Old Subject*. Having cited Thomas Campbell's remark that "Fiction in Poetry is not the reverse of

truth but her soft and enchanting resemblance." (qtd. in Cuddon 791) Wilson goes on to say,

> Now this applies especially to science fiction, in which revealed truths of Science may be given, interwoven with a pleasant story which itself may be poetic and true. (ibid)

According to J.A. Cuddon, the most obvious feature of science fiction is the invention of alternative worlds. The propensity towards and capacity for alternative worlds can be seen as "an expression of dissatisfaction" (792) with the present world. Many great science fiction works use imaginative structures to make fun of conventions of literature and society. Shakespeare, by setting his plays in a different country such as Italy, was able to protect himself from the wrath of British Royalty even though these 'other' places were still exactly like Elizabethan or Jacobean England. Science fiction writers do something similar but instead of just changing the country, they invent other planets, other universes and times for the setting of their stories. This makes the shock of recognition even greater when it is realized that the stories are in fact about the contemporary world. Numerous authors have employed this technique and among the most prominent who have used it for social criticism are H.G. Wells, Aldous Huxley and George Orwell.

In *The Time Machine*, H.G. Wells is concerned with a familiar theme for many satirical writers: the exploitation of the working class by the rich. After the 18th century in the west, a class system of haves and have-nots had emerged with the industrial revolution and the mass migration of rural labourers into the cities. Wells capitalizes on the struggle between these two groups. In his depiction of civilization 800,000 years in the future, the human race has evolved into two distinct species. The class struggles of the 19th century have continued and taken an extreme form. The angle of the worst case scenario is starkly and graphically emphasized by Wells. Reflecting the fact that religion, as a way of life, had been replaced by the scientific temper, Wells also makes use of the groundbreaking concept of evolution by Darwin in depicting the mutation of the working class as Morlocks and the capitalist class as the effete Elois. Another widely regarded science fiction novel of Wells, *Tono Bungay*, combines futuristic science fiction and contemporary social satire. The theme of scientific invention and human chicanery, are brought together to make a powerful and relevant commentary on present day society.

In *Brave New World*, Huxley takes a satirical look at a totalitarian society of the future, in which the trends of Huxley's day have been taken to extremes. The need for economic security due to the worldwide economic

depression of 1929 brought about many social and economic changes. The youth rejected the older puritanical Victorian values and imbibed modern ideas, such as communism, and began to question social class and rigid attitudes towards sex. These are taken to an extreme in *Brave New World.* The controversial scientific experiments in human behaviour control by scientists such as Ivan Pavlov, John B. Watson and Hans Spemann are also issues of concern for Huxley as he attempts to make contemporary society aware of the danger of these experiments while also questioning the ethics of using technology for social engineering.

Brave New World was written just before dictators like Adolph Hitler in Germany, Stalin in Russia, Mussolini in Italy and Mao-Tse-Tung in China, had created totalitarian states in countries that were troubled by economic and political problems. These leaders often used extreme tactics to control their citizens, from propaganda and censorship to mass murder. These grim totalitarian states and Huxley's *Brave New World*, inspired George Orwell to write his classic anti-utopian novel, *Nineteen Eighty Four.* The world described in *Nineteen Eighty Four* parallels the Stalinist Soviet Union and Hitler's Nazi Germany. The theme of betrayed revolution, formally dealt with by Orwell in *Animal Farm*, is also a theme in *Nineteen Eighty Four.* The subordination of individuals to "The Party" and the

rigorous distinction between inner party, outer party and everyone else in *Nineteen Eighty Four* can be seen as a reference to the governments of the Nazi and the Stalin regime. There are also parallels of the activities within the society. Leader worship, such as that towards Big Brother, can be compared to dictators like Hitler and Stalin. "Joycamps" is a reference to concentration camps and Thought Police to the Gestapo. The Youth League in *Nineteen Eighty Four* is also reminiscent of Hitler Youth or Octoberists/ Pioneers. There is also an extensive institutional use of propaganda in Orwell's fiction and this again, is also found in the totalitarian regimes of Hitler and Stalin. In *Nineteen Eighty Four*, lies and fear are used as propaganda to control the public.

Isaac Asimov also creates his art with the same moral concerns for society as the authors mentioned above. During his age, he had witnessed imperialism, narrow nationalism, the 2nd World War, the atomic bomb, communism, the Cold War and the coming of the computer age. Like Wells, Huxley and Orwell before him, Asimov too looks at present society and pre-supposes the direction to which mankind is headed. Using history as a precedent, he gauges the possibilities and eventualities of social evolution and scientific discovery and invention. However, despite these similarities, Asimov is very unique in his representation of the future. Unlike Wells,

Huxley and Orwell, he does not depict a utopian or dystopian world, whose focus is upon how trends in society might come to fruition, and act as a moral allegory on contemporary society. Asimov looks at trends in a wider scope, dealing with the dynamics of growth and decay of civilizations, and ways to adapt to these changes, rather than the human and cultural qualities in society at one point of time. In his endeavour to predict the next probable stages of civilization, he looks to the past or history as a guide and tries to suggest the best courses of action so as to produce a future that is most ideal or conducive for the attainment of the maximum happiness for the greatest number. Asimov's criticism and discourse on contemporary society are based on his concept of social mathematics in psychohistory, his concept of history--"...which is, in its grand sweep, similar to one of the main ingredients of Marxism-historical materialism" (Elkins 28) and his utilitarianism which Miller states, "...the progression of the (*Foundation)* series can be read as a set of ever-more-precise answers to a set of related objections to utilitarianism." (189). This dissertation has therefore attempted to examine in depth the *Foundation Series*, comprising of seven novels, along with his other selected novels -- *End of Eternity* and *Robots and Empire* and closely follow Asimov's analyses and critiques different

aspects of society as he creates what he himself has termed as social science fiction.

Chapter II: The *Foundation Trilogy* and the Concept of Psychohistory

The original *Foundation Trilogy* has afforded important materials, for both the scientist and social scientist, for analysis in the various social implications and issues that are present within the stories and also the use of psychohistory as a tool to find possible solutions to the problems faced by humanity and bring about social changes. The original *Foundation Trilogy* began with the publication of *Foundation* in 1951. It was originally a series of eight short stories published in *Astounding Magazine* between May 1942 and January 1950. The first four stories were published as *Foundation* and the remainders were published in pairs as *Foundation and Empire* in 1952 and *Second Foundation* in 1953. According to Asimov the early stories were inspired by Edward Gibbon's *The History of the Decline and Fall of the Roman Empire.* The premise of the trilogy, based on the ideas set forth in Gibbon's book, revolves around the concept of psychohistory, a concept of mathematical sociology (analogous to mathematical Physics) devised by Asimov and his editor John W. Campbell. Using the law of mass action, it

can predict the future, but only on a large scale for it is error-prone on a small scale. Here is how Asimov defines psychohistory in the novel:

> PSYCHOHISTORY–...Gaal Dornick, using nonmathematical concepts, has defined psychohistory to be that branch of mathematics which deals with the reactions of human conglomerates to fixed social and economic stimuli ... Implicit in all these definitions is the assumption that the human conglomerate being dealt with is sufficiently large for valid statistical treatment. The necessary size of such a conglomerate may be determined by Seldon's First Theorem which ... A further necessary assumption is that the human conglomerate be itself unaware of psychohistoric analysis in order that its reactions be truly random ...

The plot of *The Foundation Trilogy* focuses on the growth and reach of the Foundation against a backdrop of the decline and fall of the Galactic Empire. The first book of the trilogy, *Foundation*, begins at a time when the Galactic Empire seems to be at the height of its power. Hari Seldon, the mathematician who has spent his life developing psychohistory, recognizes the decay within the Empire and by using his concept of psychohistory predicts the fall of the Empire. Much like the Roman and British Empires, the vastness of the Galactic Empire makes it increasingly difficult for the centre to retain control and influence especially on the peripheries. Eventually, these empires crumble as the subordinate nations broke away.

The dark ages that follow the fall of the Galactic Empire is very similar to the events following the fall of the Roman Empire. The second book of the trilogy, *Foundation and Empire*, takes place a hundred years after the end of the events in the first book. The most significant event in this book is the rise of a tyrant known only as The Mule. This character has the ability to control people's minds and using this ability was able to unify a fragmenting Foundation and looking to conquer the rest of the Galaxy. The stories in *Foundation and Empire* draw heavily on Europe's experience with Hitler and Nazism. Hitler was able to take over a country in crisis and pose a threat to every other country surrounding Germany. The last book of the trilogy, *Second Foundation*, continues where *Foundation and Empire* leaves off. The book focuses on the rising power of The Mule and his downfall due to his over-ambition. This final episode of the trilogy is again very similar to the events in Europe towards the end of the Second World War. Hitler's downfall began with his overreaching ambition and consequent failure to conquer Russia.

Psychohistory is the framework upon which Isaac Asimov's Foundation rests. It provides for diverse episodes about a variety of characters over a period 400 years, and those "episodes feature a number of strong-minded individuals seeking solutions to a series of problems as they

arise (Gunn 42)." Psychohistory is one of the most interesting concept to arise out of fiction. Though totally fictitious, it has spawned a host of debates over its possible usage. It has led to the birth of the Institute of Psychohistory with its headquarters in New York. It has influenced many people including Nobel-winning economist Dr. Paul Krugman who said in an interview with Jim Lehrer that he became an economist because economics is the closest thing to psychohistory. According to Tom Siegfried, psychohistory is no longer wholly fictional but exists:

> in a loose confederation of research enterprises seeking equations that capture patterns in human behavior. These enterprises go by different names and treat different aspects of the issue.

A better understanding of the present, in order to foresee the future, and possibly help in reshaping it is a common goal of these research enterprises. Areas of analyses which were once the province of sociologists, political scientists, economists or philosophers are now routinely analysed by physicists and mathematicians. At the same time, we are learning more from psychologists and anthropologists about what goes on in the brain when humans interact, and how economic activity influences behavior in different cultures. "...Put it all together, and Asimov's idea for a predictive science of

human history no longer seems unthinkable. It may be inevitable." (ibid) Researchers in Indiana University also agree with this:

> Much as meteorologists predict the path and intensity of hurricanes, Indiana University's Alessandro Vespignani believes we will one day predict with unprecedented foresight, specificity and scale such things as the economic and social effects of billions of new Internet users in China and India, or the exact location and number of airline flights to cancel around the world in order to halt the spread of a pandemic...

Besides the various historical references mentioned, this chapter closely examines how Asimov believes that society or humanity remains unchanged as people will always be greedy, selfish, envious and a slave to a hosts of negative attitudes. As people remain the same and are therefore predictable, this makes his concept of psychohistory a possible science, and can be used as a criticism of human nature and society.

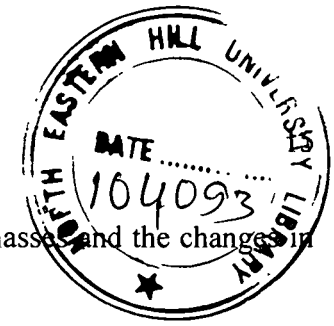
Chapter III: The *Foundation Series* and Marxist 'Historical Materialism'

The basis of the fictional science of psychohistory and its possible usage stems from the theory that history moves in cycles. This is by no

means a new or unique concept that has been theorized and developed by Asimov. Ancient civilizations such as the Aztecs, the Egyptians also believed that time moved in cycles, an idea of time and history which has influenced poets like Arnold Toynbee and W.B. Yeats. This underlying concept in the *Foundation Series*, the concept of history, is very similar with one of the main ingredients of Marxism–historical materialism.

The historical materialist theory of history, also synonymous with "the economic interpretation of history" (Bernstein, 265), looks for the causes of societal development and change in the collective ways humans use to make the means for living. The approach to studying human development and history in terms of materialism is a unique concept that totally differs from previous approaches.

> The discovery of the materialist conception of history, or rather, the consistent continuation and extension of materialism into the domain of social phenomenon, removed two chief defects of earlier historical theories. In the first place, they at best examined only the ideological motives of the historical activity of human beings, without grasping the objective laws governing the development of the system of social relations... in the second place, the earlier theories did not cover the activities of the *masses* of the population, whereas historical materialism made it possible for the first time to study with the accuracy of the natural



> sciences the social conditions of the life of the masses, and the changes in these conditions. (Lenin, 15)

According to Charles Elkins, the perspective of historical materialism entails the assertion of over-riding historical laws.

> In its cruder versions, it involves the old puzzle of historical inevitability (predestination) versus free will, which itself flows out of the often unsuccessful yet desperately necessary, and therefore always repeated, struggles of men to control their personal futures and the future of their societies. (28)

In *Foundation and Empire*, the discussion of freedom versus necessity between the old, powerless patrician, Ducem Barr, who understands the implications of Seldon's Plan, and the eager, ambitious and headstrong General of the Galactic Empire, Bel Riose, goes as follows:

> [Barr] Without pretending to predict the actions of individual humans, (Seldon's Plan) formulated definite laws capable of mathematical analysis and extrapolation to govern and predict the mass action of human groups....
>
> [Riose] You are trying to say that I am a silly robot following a predetermined course of destruction.
>
> [Barr] Do whatever you wish in your fullest exercise of freewill. You will still lose.

> [Riose] Because of Hari Seldon's dead hand?
>
> [Barr] Because of the dead hand of the mathematics of human behavior that can neither be stopped, swerved, nor delayed.

The logic of history is equated with the logic of the natural sciences. Bayta, in *Second Foundation* says:

> The laws of history are as absolute as the laws of physics, and if the probabilities of error are greater, it is only because history does not deal with as many humans as physics does atoms, so that individual variations count for more. (77)

This is a fascinating concept with clear conceptual parallels with classical Marxism. Donald Wollheim in *The Universe Makers* (1971) observes that

> ... Asimov took the basic premise of Marx and Engels, said to himself that there was a point there [i.e. in Marxism] -- that the movements of human mass must be subject to the laws of motion and interaction, and that a science could be developed based upon mathematics and utilizing all the known data...(41).

In his speech at Marx's funeral, Frederick Engels asserted that

> Just as Darwin discovered the law of evolution in organic nature, so Marx discovered the law of evolution in human history.... Marx also discovered the special law of motion governing the present-day capitalist method of production and the bourgeois society that this method of production has created. (39)

Similarly, just as Seldon concentrates not on the individual but the masses, so also Lenin says-

> Historical materialism made it possible for the first time to study with scientific accuracy the social conditions of the life of the masses and the changes in these conditions..... Marx drew attention and indicated the way to a scientific study of history as a simple process which, with all its immense variety and contradictions, is governed by definite laws. (13)

It is this concept, that history has "definite laws" which cannot only be made intelligible but can give insight into the course of future historical events, which so intrigues both the readers of the *Foundation* novels and those who study Marxism. Moreover, whether embodied in Seldon's Plan or the concept of historical materialism, this idea is the very essence of drama for it inevitably "raises the question of human free will versus historical determinism, a problem fraught with dramatic tension from Sophocles's *Oedipus Rex* through to the present." (Elkins 29)

Chapter IV: Humanity, Humanism and the Religious Discontent

Asimov, besides being a science fiction writer, was also prominently a humanist. He was the president of the American Humanist Association for eight years starting from 1985. His humanistic work and concern for the

welfare of humanity is well documented by authors such as Thomas Gunn, Janet Asimov, J. Joseph Miller and others. Being a humanist, Asimov's concerns are for humanity as a whole, but the problem of clearly pinpointing what is humanity or what can be done or averted for its good, is a dilemma faced by his characters as well as Asimov himself, and others with humanistic concerns like him. In *End of Eternity* and *Robots and Empire*, the greatest difficulty with finding solutions for the problems of humanity is to first identify what exactly is humanity, and then how to go about finding means for its benefit. In the first novel, humans have discovered a place called Eternity where they can observe the past and also travel in time. In an immense moral gesture, they decide to travel to strategic moments in the past and make subtle changes so as to prevent humankind's greatest tragedies. By doing so, they realize they are also eradicating its greatest achievements. Mankind has a way of accomplishing its greatest achievements only when forced upon by crisis and tragedies. This novel serves as a prelude to the *Foundation Series* and this chapter examines how the issues of social calculation, in the series, begin with the failures and philosophical errors dealt in it.

In *Robots and Empire*, the problem of identifying humanity again arises. The First Law of Robotics states that – "A robot may not injure a

human being, or, through inaction, allow a human being to come to harm (353)." This law is debated by two robots R. Daneel Olivaw and R. Gistard Reventlov. Daneel observes that "...the tapestry of life is more important than a single thread...that humanity is more important than a single human being" (353) So they decide to formulate a new law known as the Zeroth Law in which the robots main concern will be the service of humanity. But as soon as the law is created Daneel is asked:

> But what is your "humanity" but an abstraction? Can you point to humanity? You can injure or fail to injure a specific human being and understand the injury or lack of injury that has taken place. Can you see an injury to humanity? Can you understand it? Can you point to it? (353)

Asimov's humanism is the driving force behind the themes and plots of his major novels. Humanism is a European phenomenon and its philosophy seeks to dignify and ennoble man. As Cuddon observes:

> At its best, humanism helped to civilize man, to make him realize his potential powers and gifts, and to reduce the discrepancy between potentiality and attainment. (403)

Humanists believe that humans alone are responsible for the problems and achievements of society. "Humanists would believe that neither good nor

evil is produced by supernatural beings, and that the problems of humankind can be solved without such beings" (Seiler & Jenkins, 1999). For Asimov, religion is seen as a means of social oppression. He is of the opinion that God is created by man and agrees with Alexander Pope that "...the proper study of mankind is man." His novels reflect his view of religion as a tool for manipulating and controlling the ignorant and uneducated. Christianity is parodied in a negative light in *Foundation.* The religion is described as follows:

> ...all this talk of about the Prophet Hari Seldon and how he appointed the Foundation to carry on his commandments that there might some day be a return of the Earthly paradise: and how anyone who disobeys his commandments will be destroyed for eternity. They believe it. (103)

In his essay, *Religion in Asimov's Writings,* Michael Brummond states that:

> The parallelism to Christianity is apparent: the Prophet Hari Seldon represents Jesus Christ, the Foundation is organized religion, the commandments are similar to those given to Moses in the old testament, the Earthly paradise is Heaven, and to be destroyed for eternity is the Christian idea of Hell.

In one of his short stories, 'The Last Question' from *Robot Dreams,* human kind has evolved into one mind, free of body and co-exist with a

super computer in hyperspace. This unique science fiction story has the underlying theme that man created God, and that the problems of society can be solved only by man, or man's creation, and that a supernatural being is not needed. This is a direct representation of Asimov's humanist beliefs. This chapter has attempted to take a closer look into the religio-philosophical beliefs of Asimov and how these apply to the theme of humanity and humankind's constant search to find solutions for its existential problems.

Chapter V: Conclusion

Asimov's extended future history, as it is articulated in *The End of Eternity*, the *Robot Series* and the *Foundation Series*, can be argued that the major social themes in Asimov's social science fiction are ultimately motivated by utilitarianism. Throughout his future history:

> ...Asimov expresses a commitment to promoting the greatest good for all of humanity, an explicitly utilitarian goal. One of the central questions in his fictions is how best to go about in achieving that goal. (Miller 189).

Asimov's future history attempts to answer that very question. Asimov himself though, never claimed that his future history is an exercise

in utilitarian moral theory, Miller says, "but that is hardly surprising, for few outside of the world of professional philosophy explicitly attach labels to their moral beliefs." (ibid)

The first systematic formulation of utilitarianism belongs to Jeremy Bentham, usually credited as its founder, who explains the principle in *The Principles of Morals and Legislation*:

> By the principle of utility is meant that principle which approves or disapproves of every action whatsoever, according to the tendency which it appears to have to augment or diminish the happiness of the party whose interest is in question (190).

Hari Seldon and the workers of the Foundation concern themselves mainly with this task. The purpose of Psychohistory is not merely for predicting the future but to resolve a set of circumstances that make that future the best possible for all of humanity.

The utilitarian principle is beset with a number of problems and objections. One immediate problem is that it relies upon an assessment of the probabilities of various consequences and these probabilities can misfire, sometimes quite seriously, with the result that an action whose expected utility is quite high turns out to be really disastrous. This problem is expressed in *End of Eternity* by Noys –

> "The greatest good?" asked Noys in a detatched tone that seemed to make a mockery of the phrase. "What is that? Your machines tell you. Your Computaplexes. But who adjusts the machines and tells them what to weigh in the balance? The machines do not solve problems with greater insight than men do, only faster..." (186)

The requirement that a utilitarian be able to pick out the best set of consequences gives rise to a number of objections to utilitarianism. Utilitarians do recognize these problems and have developed more sophisticated accounts of utility calculation. Asimov, working in the science fiction tradition, likewise offers solutions to these calculation problems. In the *Foundation* series and *Robot* series Asimov reveals his humanistic side time and time again as his central characters work tirelessly for the benefit of human society.

> Asimov claimed to be a materialist, a believer in the tenet that everything could be reduced to matter and energy, but matter and energy alone do not account for his boundless appreciation of life... He disliked emphasis on difference; thus he was not in favor of people identifying with culture, ethnicity, or nation. Rather, the ties that bind were more important than those that divide (J. Asimov 179).

According to Errol Vieth, Asimov is more than a scientist and his deep appreciation of life and respect for humankind always inform and influence his writings:

> He was, then, the archetypal scientist. His understanding of the world and its workings was immense and deep, and it caused him to respond with awe, joy, and gratitude to his existence and to the physical and human worlds that he tried to understand and to explain, with much success, to others. This understanding informed his respect for and appreciation of human life, evinced in his commentaries about human cultural artifacts-namely, his writings on history, the Bible, literature, and comedy (184).

From the different social themes that have a utilitarian motif in his selected novels, it may be argued that Asimov is an author with a conscience and a great concern for the society he lives in. His life and fiction is a reflection of that conscience.

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ASIMOV AS A SOCIAL CRITIC:
A SELECT STUDY OF HIS SCIENCE FICTION

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Submitted In Partial Fulfilment of the Requirement for the Degree of Master of Philosophy

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DECLARATION

I, **Lalnunsanga Ralte**, hereby declare that the subject matter of this thesis is the record of work done by me, and that the contents of this thesis did not form the basis for the award of any previous degree to me or, to the best of my knowledge, to anybody else, and that the thesis has not been submitted by me for any research degree in any other university/institute.

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(Lalnunsanga Ralte)

TABLE OF CONTENTS

Chapter I: Introduction

Science fiction is defined as "a narrative (usually in prose) of short story, *novella* or novel length." (Cuddon 791). It deals with an array of varied topics from space and time travel to future worlds of utopian or dystopian visions. It can also be about alien invasions, geological changes, groundbreaking inventions and interplanetary warfare. "They are often fantastic though they may be rooted in reality. They stretch the imagination." (ibid) Because of this highly imaginative character, science fiction is not considered as serious art and has for many decades been stigmatized as a genre literature that adults need not bother with. Brian Aldiss, the godfather of British science fiction, said in its defense that

> ... we are living in a SF scenario. A collapsing environment, a hyper-connected world, suicide bombers, perpetual surveillance, the discovery of other solar systems, children drugged with behaviour controllers -- its all coming true at last. In such a climate, it is the conventionally literary that is threatened, and science fiction comes into its own as the most hardcore realism. (qtd. in Appleyard, 1)

Science fiction has long been used as a tool for social commentary and satire. The alternative worlds that are created, whether it be a utopia or a dystopia, serve as a commentary on the present social conditions. The best

science fiction novels such as Aldous Huxley's *Brave New World*, George Orwell's *1984* and H.G. Wells' *The Time Machine,* show the possible consequences of present actions and have had numerous essays written on their social implications. Counted among these prominent authors is a recent, more contemporary author whose comprehensive body and quality of work has earned him much critical and commercial fame.

Isaac Asimov was born on 2 January 1920 in Petrochi, Russia. His family migrated to the United States in 1923 and settled in Brooklyn, New York. He studied at Columbia University and graduated from there in 1941 with a Master's degree in Chemistry. In 1942 he moved to Philadelphia to work at a naval yard for the 2nd World War and entered the Army in 1945. He was discharged from the army in July 1946 and settled in West Newton, Massachusetts. After the war and much turmoil in his personal life, Asimov became an instructor at the Boston University of Medicine and was promoted to Assistant Professor in December 1951. On 1 July 1958, he gave up his teaching job to become a writer. By the time of his death on 6 April 1992, he had written and published close to 500 books.

Asimov's vivid imagination coupled with his rich and varied life experiences, inspired him to write stories that were highly influential and

very popular. Among these, the *Foundation Trilogy* and *The Gods Themselves* have won major awards such as the Nebula Award for Best Novel in 1972; Hugo Award for Best Novel and Locus Award for Best Science Fiction Novel in 1973. The *Foundation Series* which includes the original *Foundation Trilogy* along with two prequels and two sequels was awarded the prestigious one-time Hugo Award for Best All Time Series in 1966, beating several other science fiction and fantasy series including J.R.R. Tolkien's *The Lord of the Rings*.

From tyrants and world wars to philosophical arguments on ethics, science, history and humanity, the original *Foundation Trilogy*, along with other selected volumes that form part of the *Foundation Series*, tackle various social issues and problems which are quite pertinent to the present world. William Wilson has been credited with being the first to use the term 'science fiction' in his 1851 book, *A Little Earnest Book upon a Great Old Subject*. Having cited Thomas Campbell's remark that "Fiction in Poetry is not the reverse of truth but her soft and enchanting resemblance." (qtd. in Cuddon, 791) Wilson goes on to say,

> Now this applies especially to science fiction, in which revealed truths of Science may be given, interwoven with a pleasant story which itself may be poetic and true. (ibid)

According to J.A. Cuddon, the most obvious feature of science fiction is the invention of alternative worlds. The propensity towards and capacity for alternative worlds can be seen as "an expression of dissatisfaction" (792) with the present world. Many great science fiction works use imaginative structures to make fun of conventions of literature and society. Shakespeare, by setting his plays in a different country such as Italy, was able to protect himself from the wrath of British Royalty even though these 'other' places were still exactly like Elizabethan or Jacobean England. Science fiction writers do something similar but instead of just changing the country, they invent other planets, other universes and times for the setting of their stories. This makes the shock of recognition even greater when it is realized that the stories are in fact about the contemporary world. Numerous authors have employed this technique and among the most prominent who have used it for social criticism are H.G. Wells, Aldous Huxley and George Orwell.

In *The Time Machine*, H.G. Wells is concerned with a familiar theme for many satirical writers: the exploitation of the working class by the rich. After the 18th century in the west, a class system of haves and have-nots had emerged with the industrial revolution and the mass migration of rural labourers into the cities. Wells capitalizes on the struggle between these two groups. In his depiction of civilization 800,000 years in the future, the

human race has evolved into two distinct species. The class struggles of the 19th century have continued and taken an extreme form. The angle of the worst case scenario is starkly and graphically emphasized by Wells. Reflecting the fact that religion, as a way of life, had been replaced by the scientific temper, Wells also makes use of the groundbreaking concept of evolution by Darwin in depicting the mutation of the working class as Morlocks and the capitalist class as the effete Elois. Written in a conversational tone, *The Time Machine* opens with an unnamed narrator professing his admiration for his mentor, the older scientist known only as the Time Traveller. The narrator reflects on the disappearance of the Time Traveller three years ago and contends that he is telling the story to attest to the powers of the human imagination and as a warning of what the future can bring. He describes the Thursday night dinners the Time Traveller used to give at his home for a group of his friends. It was at one of these occasions that the Time Traveller first asserted that the Fourth Dimension not only existed, but that time travel was possible. In fact, he showed his friends a small model of his new invention, a time machine. The assembled group is shocked when he makes the machine disappear before their eyes. On the next Thursday, the Time Traveller further astounds his waiting guests when he appears suddenly in the dining room, dishevelled, dirty, and

limping. He explains that since their last meeting he has travelled to the year 802,701, where he expected to find amazing technological and cultural progress. Instead, he finds a race of beings he calls the Eloi, a diminutive, weak people who live together in harmony. Yet he is surprised to find the Eloi bereft of intellectual curiosity and fearful of the dark. The reason for this becomes clear to him when darkness falls and he discovers a second species, the Morlocks, described as primordial, predatory creatures who live below the surface and feed on the Eloi after dark. The Time Traveller chronicles his many adventures in the future, including rescuing Weena, an Eloi, from drowning; unearthing the truth of what happened to the human race; and escaping a group of marauding Morlocks. The Time Traveller then journeys even further into the future, where he discovers the extinction of all human life on Earth. When he travels thirty million years into the future, he finds no signs of life at all. He begs his skeptical guests to heed his warning: the human race cannot be allowed to devolve into the primitive Eloi and Morlocks. He then announces that he will return to the future in an attempt to further understand what awaits the human race. The Time Traveller never returns from his last journey.

Many of the different social themes of the novel have been analysed by various critics. A general summation of the major themes has been given

in the essay "*The Time Machine, H. G. Wells – Introduction*", published in *Twentieth-Century Literary Criticism* which was edited by Janet Witalec:

> Critics have found parallels between the narrator's and Time Traveller's relationship in *The Time Machine* and that of the dual protagonists in Joseph Conrad's tale "Heart of Darkness." Most commentators have focused on major thematic concerns embodied by the conflict between the Eloi and Morlock races. The story is often perceived from a Darwinian perspective; it has been noted that Wells often employed the theory of evolution as a motif in his scientific romances. Some critics have focused on Wells's concept of the duality of the individual: in the story, the Time Traveller asserts that the contradictory characteristics of the Eloi and Morlock exist within the individual and are held together by love and intellectual interest. Other commentators have interpreted the novella from a Marxist perspective: in this vein, the Morlocks represent the proletariat and the Eloi are viewed as the bourgeois class. With this interpretation, *The Time Machine* is considered a sociopolitical commentary on turn-of-the-century England. Autobiographical aspects of the story have been investigated, as issues of class were another recurring theme in Wells's life and work. Moreover, some scholars have argued that *The Time Machine* can also be perceived as an exploration of the dualities between aestheticism and utilitarianism as well as pastoralism and technology. The utopian and mythological qualities of *The Time Machine* have been a rich area for critical discussion. (n.pag.)

Another widely regarded science fiction novel of Wells, *Tono Bungay*, combines futuristic science fiction and contemporary social satire. The theme of scientific invention and human chicanery, are brought together to make a powerful and relevant commentary on present day society.

In *Brave New World*, Huxley takes a satirical look at a totalitarian society of the future, in which the trends of Huxley's day have been taken to extremes. The need for economic security due to the worldwide economic depression of 1929 brought about many social and economic changes. The youth rejected the older puritanical Victorian values and imbibed modern ideas, such as communism, and began to question social class and rigid attitudes towards sex. These are taken to an extreme in *Brave New World.* The controversial scientific experiments in human behaviour control by scientists such as Ivan Pavlov, John B. Watson and Hans Spemann are also issues of concern for Huxley as he attempts to make contemporary society aware of the danger of these experiments while also questioning the ethics of using technology for social engineering. The first three chapters present most of the important ideas or themes of the novel. The Director of Hatcheries and Conditioning explains that this Utopia breeds people to order, artificially fertilizing a mother's eggs to create babies that grow in bottles. They are not born, but decanted. Everyone belongs to one of five

classes, from the Alphas, the most intelligent, to the Epsilons, morons bred to do the dirty jobs that nobody else wants to do. The lower classes are multiplied by a budding process that can create up to 96 identical clones and produce over 15,000 brothers and sisters from a single ovary.

All the babies are conditioned, physically and chemically in the bottle, and psychologically after birth, to make them happy citizens of the society with both a liking and an aptitude for the work they will do. One psychological conditioning technique is hypnopaedia, or teaching people while they sleep-- not teaching facts or analysis, but planting suggestions that will make people behave in certain ways. The Director also makes plain that sex is a source of happiness, a game people play with anyone who pleases them.

The Controller, one of the ten men who run the world, explains some of the more profound principles on which the Utopia is based. One is that "history is bunk"; the society limits people's knowledge of the past so they will not be able to compare the present with anything that might make them want to change the present. Another principle is that people should have no emotions, particularly no painful emotions; blind happiness is necessary for stability. One of the things that guarantees happiness is a drug called soma,

which calms you down and gets you high but never gives you a hangover. Another is the "feelies," movies that reach your sense of touch as well as your sight and hearing.

After Huxley presents these themes in the first three chapters, the story begins. Bernard Marx, an Alpha of the top class, is on the verge of falling in love with Lenina Crowne, a woman who works in the Embryo Room of the Hatchery. Lenina has been dating Henry Foster, a Hatchery scientist; her friend Fanny nags her because she hasn't seen any other man for four months. Lenina likes Bernard but doesn't fall in love with him. Falling in love is a sin in this world in which one has sex with everyone else, and she is a happy, conforming citizen of the Utopia.

Bernard is neither happy nor conforming. He's a bit odd; for one thing, he's small for an Alpha, in a world where every member of the same caste is alike. He likes to treasure his differences from his fellows, but he lacks the courage to fight for his right to be an individual. In contrast, his friend Helmholtz Watson is successful in sports, sex, and community activities, but openly dissatisfied because instead of writing something beautiful and powerful, his job is to turn out propaganda.

Bernard attends a solidarity service of the Fordian religion, a parody of Christianity as practised in England in the 1920s. It culminates in a sexual orgy, but he doesn't feel the true rapture experienced by the other 11 members of his group.

Bernard then takes Lenina to visit a Savage Reservation in North America. While signing his permit to go, the Director tells Bernard how he visited the same Reservation as a young man, taking a young woman from London who disappeared and was presumed dead. He then threatens Bernard with exile to Iceland because Bernard is a nonconformist: he doesn't "gobble up" pleasure in "his leisure time like an infant."

At the Reservation, Bernard and Lenina meet John, a handsome young Savage who, Bernard soon realizes, is the son of the Director. Clearly, the woman the Director had taken to the Reservation long ago had become pregnant as the result of an accident that the citizens of Utopia would consider obscene. John has a fantasy picture of the Utopia from his mother's tales and a knowledge of Shakespeare that he mistakes for a guide to reality.

Bernard gets permission from the Controller to bring John and Linda, his mother, back to London. The Director has called a public meeting to announce Bernard's exile, but by greeting the Director as lover and father,

respectively, Linda and John turn him into an obscene joke. Bernard stays and becomes the centre of attention of all London because he is, in effect, John's guardian, and everybody wants to meet the Savage. Linda goes into a permanent soma trance after her years of exile on the Reservation. John is taken to see all the attractions of new world society and doesn't like them. But he enjoys arguing with Helmholtz about them, and about Shakespeare.

Lenina has become popular because she is thought to be sleeping with the Savage. Everyone envies her and wants to know what it's like. But, in fact, while she wants to sleep with John, he refuses because he, too, has fallen in love with her-- and he has taken from Shakespeare the old-fashioned idea that lovers should be pure. Not understanding this, she finally comes to his apartment and takes her clothes off. He throws her out, calling her a prostitute because he thinks she's immoral, even though he wants her desperately.

John then learns that his mother is dying. The hospital illustrates the Utopia's approach to death, which includes trying to completely eliminate grief and pain. When John goes to visit Linda he is devastated; his display of grief frightens children being taught that death is a pleasant and natural process. John grows so angry that he tries to bring the Utopia back to what

he considers a state of sanity and morality by disrupting the daily distribution of soma to lower-caste Delta workers. That leads to a riot in which John, Bernard and Helmholtz are arrested.

The three then confront the Controller, who explains more of the Utopia's principles. Their conversation reveals that the Utopia achieves its happiness by giving up science, art, religion, and other things that we prize in the real world. The Controller sends Bernard to Iceland, after all, and Helmholtz to the Falkland Islands. He keeps John in England, but John finds a place where he can lead a hermit's life, complete with suffering. His solitude is invaded by Utopians who want to see him suffer, as though it were a sideshow spectacle; when Lenina joins the mob, he kills himself.

Huxley was greatly influenced by the social, political and scientific issues of his age. The novel reflects these concerns with great clarity:

> Although the novel is set in the future, it contains contemporary issues of the early 20th century. The Industrial Revolution had transformed the world. Mass production had made cars, telephones, and radios relatively cheap and widely available throughout the developed world. The political, cultural, economic and sociological upheavals of the then-recent Russian Revolution of 1917 and the First World War (1914–1918) were resonating throughout the world as a whole and the individual lives of most people.

> Accordingly, many of the novel's characters named after widely-recognized influential people of the time, for example, Polly Trotsky, Benito Hoover, Lenina and Fanny Crowne, Mustapha Mond, Helmholtz Watson, and Bernard Marx (eNotes).

Besides world issues, Huxley also examined the cultural and moral problems of his day in *Brave New World*:

> Huxley was able to use the setting and characters from his science fiction novel to express widely held opinions, particularly the fear of losing individual identity in the fast-paced world of the future. An early trip to the United States gave *Brave New World* much of its character. Not only was Huxley outraged by the culture of youth, commercial cheeriness, sexual promiscuity and the inward-looking nature of many Americans; he had also found a book by Henry Ford on the boat to America. There was a fear of Americanization in Europe, so to see America firsthand, as well as read the ideas and plans of one of its foremost citizens, spurred Huxley to write *Brave New World* with America in mind. The "feelies" are his response to the "talkie" motion pictures, and the sex-hormone chewing gum is parody of the ubiquitous chewing gum, which was something of a symbol of America at that time (eNotes).

The unrealistic optimism about the future during his age was also a major concern for Huxley. This optimism is well expressed in Wells' *Men*

Like Gods. Huxley was inspired to write a parody of this, which became *Brave New World.* In an article in the 4 May 1935 issue of the Illustrated London News, G.K. Chesterton explained that:

> Huxley was revolting against the "Age of Utopias" — a time, mostly before the First World War, inspired by what H.G. Wells and G.B. Shaw were writing about socialism and a World State. After the Age of Utopias came what we may call the American Age, lasting as long as the Boom. Men like Ford or Mond seemed to many to have solved the social riddle and made capitalism the common good. But it was not native to us; it went with a buoyant, not to say blatant optimism, which is not our negligent or negative optimism. Much more than Victorian righteousness, or even Victorian self-righteousness, that optimism has driven people into pessimism. For the Slump brought even more disillusionment than the War. A new bitterness, and a new bewilderment, ran through all social life, and was reflected in all literature and art. It was contemptuous, not only of the old Capitalism, but of the old Socialism. *Brave New World* is more of a revolt against Utopia than against Victoria. (9)

Brave New World was written just before dictators like Adolph Hitler in Germany, Stalin in Russia, Mussolini in Italy and Mao-Tse-Tung in China, had created totalitarian states in countries that were troubled by economic and political problems. These leaders often used extreme tactics to

control their citizens, from propaganda and censorship to mass murder. These grim totalitarian states and Huxley's *Brave New World*, inspired George Orwell to write his classic anti-utopian novel, *Nineteen Eighty Four.* The protagonist in the novel, Winston Smith, is a member of the Outer Party and lives in the ruins of London, the chief city of Airstrip One — a front-line province of the totalitarian superstate Oceania. He grew up in post-Second World War Britain, during the revolution and civil war. When his parents disappeared during the civil war, he was picked up by the growing Ingsoc (newspeak for "English Socialism") movement, placed into an orphanage and eventually given a job in the Outer Party. Winston lives a squalid existence in a one-room apartment in "Victory Mansions", and eats black bread, synthetic meals served at his workplace, and drinks industrial-grade "Victory Gin." He is discontent with his lifestyle, and keeps an ill-advised journal of his negative thoughts and opinions about the Party. This journal, along with any other eccentric behaviour, if found, would result in his torture and death through the dealings of the Thought Police. The Thought Police have telescreens in every household and public area, as well as hidden microphones and spies in order to catch potential thought criminals who could endanger the sanctity of the Party. Children were carefully

brainwashed from birth to report any suspected thought criminal, even their parents.

The Ministry of Truth, which exercises complete control over all media in Oceania, employs Winston at the Ministry's Records Department, where he doctors historical records in order to comply with the Party's version of the past. Since the events of the present constantly shape the perception of the past, the task is a never-ending one.

While Winston likes his work, especially the intellectual challenge involved in fabricating a complete historical anecdote from scratch, he is also fascinated by the real past, and eagerly tries to find out more about the forbidden truth. At the Ministry of Truth, he encounters Julia, a mechanic on the novel-writing machines, and the two begin a necessarily clandestine relationship, regularly meeting up in the countryside (away from surveillance) or in a room above an antique shop in the Proles' area of the city. The owner of the shop exchanges various facts on the mysterious pre-revolutionary past with Winston and sells him artifacts from this period, as well as renting the room to them. Julia and Winston find their new hiding place a paradise, as there is no telescreen and so they believe themselves completely alone and safe.

As their relationship progresses, Winston's views begin to change, and he finds himself relentlessly questioning Ingsoc. Unknown to the two (or to the reader), he and Julia are under surveillance by the Thought Police. When he is approached by Inner Party member O'Brien, Winston believes that he has made contact with the Resistance or Brotherhood which is opposed to the ideals of the Party. O'Brien gives Winston a copy of "the book," a searing criticism of Ingsoc believed by Smith to have been written by the dissident Emmanuel Goldstein, leader of the Brotherhood.

Winston and Julia are eventually and unavoidably apprehended by the Thought Police in their supposed sanctuary, which actually contains a hidden telescreen, and are then interrogated separately in the Ministry of Love, where opponents of the regime are tortured and executed. O'Brien is there, and reveals to Winston that he has been brought to "be cured" of his hatred for the Party, and subjects Winston to numerous torture sessions. During one of these sessions, he explains to Winston the nature of the endless world war, and that the purpose of the torture is not to extract a fake confession, but to alter the way that Winston thinks.

The party intends to achieve this with a combination of torture and electroshock therapy, continuing until O'Brien decides that Winston is

"cured." Eventually, Winston is sent into Room 101, the most feared room in the Ministry of Love, where a person's greatest fear is forced upon them as the final step in their "re-education." Since Winston is morbidly afraid of rats, a cage of the hungry vermin is placed over his eyes, so that when the door is opened, they will eat their way through his skull. In terror, as the cage is placed onto his head, he screams, "Do it to Julia!" breaking his vow to never betray her, in order to stop the torture.

Near the end, Winston and Julia again meet, but their feelings for each other have been destroyed. Winston has become an alcoholic and he knows that eventually he will be killed. The one thing Winston has held on to is his hatred of Big Brother, which he feels would be his victory over the party's otherwise absolute power. However, by the end of the novel, the torture and 'reprogramming' have been successful, because Winston realizes that "He loved Big Brother."

The world described in *Nineteen Eighty Four* parallels the Stalinist Soviet Union and Hitler's Nazi Germany. The theme of betrayed revolution, formally dealt with by Orwell in *Animal Farm*, is also a theme in *Nineteen Eighty Four*. The subordination of individuals to "The Party" and the rigorous distinction between inner party, outer party and everyone else in

Nineteen Eighty Four can be seen as a reference to the governments of the Nazi and the Stalin regime. There are also parallels of the activities within the society. Leader worship, such as that towards Big Brother, can be compared to dictators like Hitler and Stalin. "Joycamps" is a reference to concentration camps and Thought Police to the Gestapo. The Youth League in *Nineteen Eighty Four* is also reminiscent of Hitler Youth or Octoberists/ Pioneers. There is also an extensive institutional use of propaganda in Orwell's fiction and this again, is also found in the totalitarian regimes of Hitler and Stalin. In *Nineteen Eighty Four*, lies and fear are used as propaganda to control the public.

1984 is a political novel written with the purpose of warning readers in the West of the dangers of totalitarian government. Orwell portrays the perfect totalitarian society, the most extreme realization imaginable of a modern-day government with absolute power. The title of the novel is meant to indicate to its readers in 1948 that the story represented a real possibility for the near future: if totalitarianism is not opposed, the title suggested, some variation of the world described in the novel could become a reality in only thirty-five years time. The Party uses a number of techniques to control its citizens, each of which is an important theme of its own in the novel. The

first of these is psychological manipulation in which independent thinking is controlled:

> The Party barrages its subjects with psychological stimuli designed to overwhelm the mind's capacity for independent thought. The giant telescreen in every citizen's room blasts a constant stream of propaganda designed to make the failures and shortcomings of the Party appear to be triumphant successes. The telescreens also monitor behavior—everywhere they go, citizens are continuously reminded, especially by means of the omnipresent signs reading "BIG BROTHER IS WATCHING YOU," that the authorities are scrutinizing them. The Party undermines family structure by inducting children into an organization called the Junior Spies, which brainwashes and encourages them to spy on their parents and report any instance of disloyalty to the Party. The Party also forces individuals to suppress their sexual desires, treating sex as merely a procreative duty whose end is the creation of new Party members. The Party then channels people's pent-up frustration and emotion into intense, ferocious displays of hatred against the Party's political enemies. Many of these enemies have been invented by the Party expressly for this purpose.(SparkNotes, Editors)

Another technique used by The Party is physical control where extreme measures like torture are used to manipulate the thoughts of citizens:

> In addition to manipulating their minds, the Party also controls the bodies of its subjects. The Party constantly watches for any sign of disloyalty, to the point that, as Winston observes, even a tiny facial twitch could lead to an arrest. A person's own nervous system becomes his greatest enemy. The Party forces its members to undergo mass morning exercises called the Physical Jerks, and then to work long, grueling days at government agencies, keeping people in a general state of exhaustion. Anyone who does manage to defy the Party is punished and "reeducated" through systematic and brutal torture. After being subjected to weeks of this intense treatment, Winston himself comes to the conclusion that nothing is more powerful than physical pain—no emotional loyalty or moral conviction can overcome it. By conditioning the minds of their victims with physical torture, the Party is able to control reality, convincing its subjects that 2 + 2 = 5. (ibid)

The control or distortion of history is another important theme in *1984* and also a very real danger in the world today.

> The Party controls every source of information, managing and rewriting the content of all newspapers and histories for its own ends. The Party does not allow individuals to keep records of their past, such as photographs or documents. As a result, memories become fuzzy and unreliable, and citizens become perfectly willing to believe whatever the Party tells them. By controlling the present, the Party is able to manipulate

> the past. And in controlling the past, the Party can justify all of its actions in the present. (ibid)

The use of technology and language as means of subversion and mind control are also examined in the novel. Through the use of telescreens and hidden microphones, members of the Party are monitored all the time. The Party also uses different complicated methods to control on a large scale, the economic production and sources of information. Besides these, the Party invents fearsome machinery used for inflicting horrible tortures on its supposed enemies. Technology which is often perceived as working for moral good is shown as an instrument for facilitating large-scale evil and terror. Language is a very important factor of human thought as it a crucial element in the structures and limitations of ideas that an individual can formulate and express. Orwell shows in his novel the dangers of a central political agency having control of it. Language can be restructured by such an agency to quell all rebellious and disobedient thoughts by simply removing the words necessary to formulate such ideas. In *1984*, the Party replaces English with Newspeak; the ultimate goal being to subdue and eradicate all concepts and ideas that may question the complete authority of the Party. Postcolonial theory reflects this idea of the use of language as a manipulative controlling force. The loss of culture and history due to the loss

of language of local populations through the institutionalisation the language of the colonising nations is often a topic of analyses by many postcolonial writers. These foreign countries uproot the local languages and replaced it with their own by using their language as the language of government and business. Hence they are able to take political and military control of distant regions and bring Orwell's fears to live.

Isaac Asimov also creates his art with the same moral concerns for society as the authors mentioned above. Isaac Asimov was a humanist and a rationalist. He does not oppose religious conviction in others, but he frequently rails against superstitious and pseudoscientific beliefs that try to pass themselves off as genuine science. During his childhood, his father and mother observed Orthodox Jewish traditions, though not as stringently as they had in Petrovichi; they did not, however, force their beliefs upon young Isaac. Thus he grew up without strong religious influences, coming to believe that the Torah represented Hebrew mythology in the same way that the *Iliad* recorded Greek mythology. For a brief while, his father worked in the local synagogue to enjoy the familiar surroundings and "shine as a learned scholar" versed in the sacred writings. This scholarship was a seed for his later authorship and publication of *Asimov's Guide to the Bible,* an analysis of the historic foundations for both old and new testaments. For

many years, Asimov called himself an atheist; however, he considered the term somewhat inadequate, as it described what he did not believe rather than what he did. Eventually, he described himself as a "humanist" and considered that term more practical. According to Asimov's own autobiography (1994), while his parents were Orthodox Jews, he remained without religion simply because no one made an effort to teach him any religion (p. 12). According to Asimov, he was "sometimes suspected of being nonreligious as an act of rebellion against Orthodox parents...but it was not true of me. I have rebelled against nothing. I am, in short, a rationalist and believe only that which reason tells me is so (p. 13)." Humanists belive that humans alone are responsible for the problems and achievements of society. Humanists would believe that neither good nor evil is produced by supernatural beings, and that the problems of humankind can be solved without such beings (Seiler & Jenkins, 1999). As Asimov put it, "...I am incapable of accepting that existence on faith alone (Asimov, 1995, p. 301)." Asimov perfectly summed up his religious views by saying "I don't have the evidence to prove that God doesn't exist, but I so strongly suspect that he doesn't that I don't want to waste my time" (as cited in Corvallis Secular Society, 1997).

Asimov's wife, Janet Asimov, in *It's Been a Good Life*, states:

> Asimov claimed to be a materialist, a believer in the tenet that everything could be reduced to matter and energy, but matter and energy alone do not account for his boundless appreciation of life... He disliked emphasis on difference; thus he was not in favor of people identifying with culture, ethnicity, or nation. Rather, the ties that bind were more important than those that divide (J. Asimov 179).

This concern for humanity is often reflected in his works. The original *Foundation Trilogy* analyses the various social implications and issues that are present within the stories and also the use of psychohistory as a tool to bring about social changes and find possible solutions to the problems faced by humanity. The original *Foundation Trilogy* began with the publication of *Foundation* in 1951. It was originally a series of eight short stories published in *Astounding Magazine* between May 1942 and January 1950. The first four stories were published as *Foundation* and the remainders were published in pairs as *Foundation and Empire* in 1952 and *Second Foundation* in 1953.The plot of *The Foundation Trilogy* focuses on the growth and reach of the Foundation against a backdrop of the decline and fall of the Galactic Empire. The series draws, at a much deeper level, from later historical events and closely follow the 19th century narrative of Manifest Destiny, and on Europe's experience with Hitler and Nazism. *The Foundation Trilogy* is

obviously not about these historical events but they are the source of the stories' thematic resonance. The *Foundation Series* which includes the original *Foundation Trilogy* along with two prequels and two sequels was awarded the prestigious one-time Hugo Award for Best All Time Series in 1966, beating several other science fiction and fantasy series including J.R.R. Tolkien's *The Lord of the Rings*.

During his age, he had witnessed imperialism, narrow nationalism, the 2nd World War, the atomic bomb, communism, the Cold War and the coming of the computer age. Like Wells, Huxley and Orwell before him, Asimov too looks at present society and pre-supposes the direction to which mankind is headed. Using history as a precedent, he gauges the possibilities and eventualities of social evolution and scientific discovery and invention. However, despite these similarities, Asimov is very unique in his representation of the future. Unlike Wells, Huxley and Orwell, he does not depict a utopian or dystopian world, whose focus is upon how trends in society might come to fruition, and act as a moral allegory on contemporary society. Asimov looks at trends in a wider scope, dealing with the dynamics of growth and decay of civilizations, and ways to adapt to these changes, rather than the human and cultural qualities in society at one point of time. In his endeavour to predict the next probable stages of civilization, he looks

to the past or history as a guide and tries to suggest the best courses of action so as to produce a future that is most ideal or conducive for the attainment of the maximum happiness for the greatest number. Errol Vieth, commenting on his life and art, states:

> He was, then, the archetypal scientist. His understanding of the world and its workings was immense and deep, and it caused him to respond with awe, joy, and gratitude to his existence and to the physical and human worlds that he tried to understand and to explain, with much success, to others. This understanding informed his respect for and appreciation of human life, evinced in his commentaries about human cultural artifacts-namely, his writings on history, the Bible, literature, and comedy (184).

Asimov's criticism and discourse on contemporary society are based on his concept of social mathematics in psychohistory, his concept of history--"...which is, in its grand sweep, similar to one of the main ingredients of Marxism-historical materialism" (Elkins 28) and his utilitarianism which Miller states, "...the progression of the *(Foundation)* series can be read as a set of ever-more-precise answers to a set of related objections to utilitarianism." (189). This dissertation will examine in depth the *Foundation Series*, comprising of seven novels, along with his other

selected novels -- *End of Eternity* and *Robots and Empire* and closely follow Asimov's analyses and critiques on different aspects of society as he creates what he himself has termed as social science fiction.

Chapter II: The *Foundation Trilogy* and the Concept of Psychohistory

The original *Foundation Trilogy* has afforded important materials, for both the scientist and social scientist, for analysis in the various social implications and issues that are present within the stories and also the use of psychohistory as a tool to find possible solutions to the problems faced by humanity and bring about social changes. The original *Foundation Trilogy* began with the publication of *Foundation* in 1951. It was originally a series of eight short stories published in *Astounding Magazine* between May 1942 and January 1950. The first four stories were published as *Foundation* and the remainders were published in pairs as *Foundation and Empire* in 1952 and *Second Foundation* in 1953. According to Asimov the early stories were inspired by Edward Gibbon's *The History of the Decline and Fall of the Roman Empire.* The premise of the trilogy, based on the ideas set forth in Gibbon's book, revolves around the concept of psychohistory, a concept of mathematical sociology (analogous to mathematical Physics) devised by

Asimov and his editor John W. Campbell. Using the law of mass action, it can predict the future, but only on a large scale for it is error-prone on a small scale. Here is how Asimov defines psychohistory in the novel:

> PSYCHOHISTORY–...Gaal Dornick, using nonmathematical concepts, has defined psychohistory to be that branch of mathematics which deals with the reactions of human conglomerates to fixed social and economic stimuli ... Implicit in all these definitions is the assumption that the human conglomerate being dealt with is sufficiently large for valid statistical treatment. The necessary size of such a conglomerate may be determined by Seldon's First Theorem which ... A further necessary assumption is that the human conglomerate be itself unaware of psychohistoric analysis in order that its reactions be truly random ...

The plot of *The Foundation Trilogy* focuses on the growth and reach of the Foundation against a backdrop of the decline and fall of the Galactic Empire. The series draws, at a much deeper level, from later historical events and closely follow the 19th century narrative of Manifest Destiny, and on Europe's experience with Hitler and Nazism. *The Foundation Trilogy* is obviously not about these historical events but they are the source of the stories' thematic resonance. The focus of the books is on the trends through which a civilization might progress, specifically seeking to analyse their progress, using history as a precedent. Although any science fiction novels

such as Nineteen Eighty-Four also do this, their focus is upon how current trends in society might come to fruition, and act as a moral allegory on the modern world. *The Foundation Trilogy*, on the other hand, looks at trends in a wider scope, dealing with societal evolution and adaptation rather than the human and cultural qualities at one point of time.

The first book of the trilogy, *Foundation*, begins at a time when the Galactic Empire seems to be at the height of its power. Hari Seldon, the mathematician who has spent his life developing psychohistory, recognizes the decay within the Empire and by using his concept of psychohistory predicts the fall of the Empire. Stagnation of thought along with the increasing dependency of Trantor, the capital of the Empire, on the other planets for their major supplies makes it weak and susceptible to attack. Much like the Roman Empire, the vastness of the Empire makes it increasingly difficult for the centre to retain control and influence especially on the peripheries. The subordinate kingdoms started gaining more and more power with the centre unable to check this trend. This is very similar to nineteenth century England, which, at that time, controlled India, large swaths of Africa and China, Australia and Canada. Just as the British Empire it began to crumble from within when it was at its peak, so also the Galactic Empire was slowly weakening as the subordinate planets started to break

away. In both the British and Galactic Empires, the efforts made to contain the nationalist movements spreading throughout their colonies drained both empires economically and politically.

With the fall of the Galactic Empire, civilization is once again plunged into a dark age. Historically, this is greatly influenced by the fall of the Roman Empire and the dark ages that followed. A period of ignorance and superstitions was cast upon the once great empire as all knowledge seemed to have been lost. Religion comes into the fore as a means of mass control and when this lost its influence, trade and commerce took over. The rise of Traders and Merchant Princes in *Foundation* is influenced historically by the rise of the bourgeoisie and nationalism. The book ends with the growth of the First Foundation, a part industrial, a part bureaucratic-technological society.

The second book of the trilogy, *Foundation and Empire*, takes place a hundred years after the end of the events in the first book. The Empire has ceased to exist, Trantor has been sacked by a "barbaric fleet" and only a small rump of twenty agricultural planets remains. Most of the galaxy has split into barbaric kingdoms as the Empire enters into a more rapid phase of decline and civil wars. The Foundation has become a dominant power in the galaxy, controlling its regions through its trading networks. Leadership of

the Foundation has become degenerate. In response to the internal corruption within the Foundation, roughly thirty other planets belonging to it, which have become wealthy on their own through extensive trade, begin to plan a succession war against the Foundation. In addition, an external threat also arises in the form of a mysterious man known only as The Mule. The Mule possesses the ability to sense and manipulate the emotions of others, usually creating fear or total devotion within his victims. He uses this ability to take over the independent systems bordering the Foundation and has them wage a war against it. As mentioned, the stories in *Foundation and Empire* draw heavily on Europe's experience with Hitler and Nazism. Hitler was able to take over a country in crisis and pose a threat to every other country surrounding Germany. He started by first conquering or unifying the small countries that broke away from Germany and then he turned his eye to the rest of the world.

The last book of the trilogy, *Second Foundation*, continues where *Foundation and Empire* leaves off. In Part I of the book, "Search by The Mule," The Mule has become the ruler of the Foundation and he stands as the most powerful force in the galaxy. The only threat to his power and eventual rule over the entire galaxy is the Second Foundation. Hari Seldon has created two Foundations before the fall of the Galactic Empire. He has

placed them at opposite ends of the galaxy. The location of the First Foundation is Terminus, which stands at the periphery of the once powerful Galactic Empire but the location of the Second Foundation is always kept secret. The Mule goes in search of this elusive Second Foundation with the intent of destroying it. He is thwarted by agents of the Second Foundation who are also telepaths like him. In Part II of *Second Foundation,* The Mule is now dead and fifty years have passed since his death. The people of the First Foundation built a device that can join all telepathic abilities and in their quest to find the Second Foundation, they conclude that Terminus itself is the location of the Second Foundation as the disc of a galaxy has no end but leads back to the same point. Thus they declare the Second Foundation destroyed after arresting roughly fifty telepaths in Terminus. The Second Foundation is actually located in Trantor, at the centre of the galaxy. It is located at the social end of the Galactic Empire. This final episode of the trilogy is again very similar to the events in Europe towards the end of the Second World War. Hitler's downfall began with his overreaching ambition and consequent failure to conquer Russia. He spread his military powers too thinly over the other countries of Europe which united to put an end to his menace. Finally Germany was defeated and taken apart to ensure it never posed a threat to the world again.

Psychohistory is the framework upon which Isaac Asimov's Foundation rests. It provides for diverse episodes about a variety of characters over a period 400 years, and those "episodes feature a number of strong-minded individuals seeking solutions to a series of problems as they arise" (Gunn 42). In the novel, these problems have all been fore-ordained long ago by Hari Seldon's science of psychohistory. He, however, never reveals this foreseen future beforehand for fear that the knowledge may result in individual attempts to interfere with the eventual events he deemed necessary for the overall progression of mankind. He only made recordings that were sealed in a vault and would open only at strategic points in history referred to as a Seldon Crises. The recordings would inform the main characters of Seldon's awareness of their current predicaments and assure them that it is all part of a bigger picture that has been calculated by psychohistory. Although at the time of crises they struggle with the dilemma present, the courses of action eventually taken by the main characters have all been foreseen by Seldon, and they realise later always, that it was the only logical course they could have taken.

Psychohistory is defined by Asimov as a "'profound statistical science' that deals with the reactions of human conglomerates to fixed social and economic stimuli" (Touponce 76). In short, this science predicts the

future by treating humanity as one massive series of mathematical equations. However, the one drawback of psychohistory is that this science does not account for individual, random variables. Hari Seldon uses the science of psychohistory to predict the fall of the massive Galactic Empire. By using complex mathematical equations, Seldon is able to mathematically prove that the downfall of the Galactic Empire is eminent. In addition, psychohistory also adds a sense of determination and predestination to Foundation. The main characters in each book of the novel are aware that when a Seldon crisis occurs, they will manage to make the correct decisions leading to the inevitable outcome. Seldon's prophesies "are revealed only after the fact, and even the solutions that he or others say are obvious are obvious only in retrospect, as in all good histories" (Gunn 41). This is first shown in "The Psychohistorians" when Salvor Hardin makes the decision that he must take over the management of the Foundation. This decision is logical in retrospect, but it causes Hardin much agonizing over the probable results of his actions before he does them. The dilemma experienced by Asimov's characters is how to achieve the predetermined outcome concocted by Seldon. The hero of the first Foundation, Salvor Hardin, decides to wait until the crisis limits his choices to only one course of action. He argues:

> ...the future isn't nebulous. It's been calculated out by Seldon and charted. Each successive crisis in our history is mapped out and each depends in a measure on the successful conclusion of the ones previous...At each crisis our freedom of actions would become circumscribed with possibly to the point where only one course of action was possible...As long as more than one course of action is possible, the crisis has not been reached. We must let things drift so long as we possibly can. (Asimov 119)

This cause of action lets the character "simply follow the logic of Seldon's plan; he will do 'one hundred percent of nothing'"(Elkins 102). However, the reader is left in suspense until the crisis has reached its intended and predicted conclusion.

Psychohistory is one of the most interesting concepts to arise out of fiction. Princeton economist, Dr. Paul Krugman, states in Newsweek that:

> One significant aspect of the series [The Foundation Trilogy] is Asimov's invention of psychohistory with its implications for determinism and free will. Psychohistory was put together out of psychology, sociology, and history -- not hard sciences, which Campbell had a reputation for preferring, but at best soft sciences: a behavioral science, a social science, and a discipline that has difficulty deciding whether to define itself as a social science or a humanity... Psychohistory is the art of prediction

> projected as a science; later it might have been called 'futurology' or 'futuristics. (10)

Though the concept of psychohistory is totally fictitious, it has spawned a host of debates over its possible usage. It has led to the birth of the Institute of Psychohistory with its headquarters in New York. It has influenced many people including Nobel-winning economist, Krugman, who said in an interview with Jim Lehrer that he became an economist because economics is the closest thing to psychohistory. According to Tom Siegfried, psychohistory is no longer wholly fictional but exists:

> in a loose confederation of research enterprises seeking equations that capture patterns in human behavior. These enterprises go by different names and treat different aspects of the issue. . But they all share a goal of better understanding the present in order to foresee the future, and possibly help shape it. (n.pag.)

A better understanding of the present, in order to foresee the future, and possibly help in reshaping it is a common goal of these research enterprises. Areas of analyses which were once the province of sociologists, political scientists, economists or philosophers are now routinely analysed by physicists and mathematicians. At the same time, we are learning more from psychologists and anthropologists about what goes on in the brain

when humans interact, and how economic activity influences behaviour in different cultures. "...Put it all together, and Asimov's idea for a predictive science of human history no longer seems unthinkable. It may be inevitable" (ibid). Researchers in Indiana University also agree with this:

> Much as meteorologists predict the path and intensity of hurricanes, Indiana University's Alessandro Vespignani believes we will one day predict with unprecedented foresight, specificity and scale such things as the economic and social effects of billions of new Internet users in China and India, or the exact location and number of airline flights to cancel around the world in order to halt the spread of a pandemic...(n.pag.)

Universities and institutions around the world have seized versions of Asimov's vision for new research themes. At the Santa Fe Institute in New Mexico, a new behavioural sciences program focuses on economic behaviour and cultural evolution. The National Science Foundation has identified "human and social dynamics" as a new funding priority area. At various schools, collaborators from diverse departments are creating new hybrid disciplines, with names like econophysics, socionomics, evolutionary economics, social cognitive neuroscience and experimental economic anthropology. Among the newest of the enterprises, and closest to the spirit of Asimov's psychohistory, is a discipline called sociophysics. The name has

been around for decades, but only in the 21st century has it become more science than slogan. Like Asimov's psychohistory, sociophysics is rooted in statistical mechanics, the math used by physicists to describe the big picture when lacking data about the details. For instance it is not possible to track the trillion molecules of air floating around in a room but statistical mechanics can tell how an air conditioner will affect the overall temperature. In a similar way, science cannot describe how any given individual will behave but put enough people together and as Asimov's psychohistorian Hari Seldon reasoned, the laws of human interaction will produce predictable patterns — just as the way molecules move and interact determines the temperature and pressure of a gas.

Statistical mechanics math is nowadays routinely used for problems far removed from its standard uses with gases or chemical reactions or magnetic materials. Everything from the flow of funds in the stock market to the flow of traffic on interstate highways has been the subject of statistical-physics study. And more and more, that math is used to describe people as though they were molecules, by physicists who are, in effect, taking the temperature of society.

As mentioned, Asimov's concept of psychohistory is a predictive science for large masses only:

> Psycho-history dealt not with man, but with man-masses. It was the science of mobs; mobs in their billions. It could forecast reactions to stimuli with something of the accuracy that a lesser science could bring to the forecast of a rebound of a billiard ball. The reaction of one man could be forecast by no known mathematics; the reaction of a billion is something else again. (Seigfried, n.pag.)

The irony of it is that it can be influenced by little events or actions and inactions of an individual or groups of individuals such as Salvor Hardin and the agents of the Second Foundation. There is a new paper which examines the idea of "contagion"-- the spread of anything through a population, whether infectious disease or ideas, fads, technological innovations, or social unrest. As it turns out, fads need not always spread the same way as a disease, as different scenarios may guide the course of different contagions. Peter Dodds and Duncan Watts of Columbia University published a paper in Physical Review Letters stating:

> In some cases, a small starting "seed" (a literal virus, perhaps, or just a new idea) can eventually grow into an epidemic; in other cases a seed infects too few people and the disease or idea dies out. What happens can depend on how much more likely a second exposure is to infect an individual than a first exposure. (n.pag.)

The findings suggest that the spread of diseases or ideas depends less on "super spreaders" or opinion leaders than on how susceptible people are — how resistant to disease or how adamant about their current opinion. Such results imply that the best way to hamper or advance contagion would be strategies that increase or reduce the odds of infection. Better health procedures, for instance, or financial incentives to change voting preferences, could tip the future one way or another. "Our results suggest that relatively minor manipulations ... can have a dramatic impact on the ability of a small initial seed to trigger a global contagion event (ibid)." In real life, of course, people don't necessarily transmit opinions or viruses in the simple ways that such analyses assume. So some experts question how useful the statistical mechanics approach to society will ultimately be. Cornell University mathematician, Steven Strogatz says:

> I think in some limited domains it might be pretty powerful...It really is the right language for discussing enormous systems ... But I worry that a lot of these physicist-style models of social dynamics are based on a real dopey view of human psychology.(qtd. in Asimov's 'Foundation' Theories)

So to succeed, statistical-physics math may have to meet face to face with social cognitive neuroscience, a booming research field that is all about

understanding face-to-face interactions between real people. Brain scans and experiments with brain-damaged patients reveal how people respond to or empathize with others they encounter, providing insights about behaviours people choose in different social situations.

Further help may come from neuroscientists who study the brain activity underlying economic choices, in the new field of neuroeconomics. An offshoot, neuromarketing, may use brain activity-analyses to plan advertising for political campaigns that enlist brain-based strategies for maneuvering the future in one direction or another.

All these approaches still generate but a shadow of Asimov's full-scale psychohistory. Everybody knows there's much more work to be done to match the predictive power achieved by Hari Seldon. Ironically, some of that new work may come from scientists who are unwittingly following in the footsteps of Seldon himself. In later prequels to the *Foundation Trilogy*, written decades after the original stories, Asimov described how Seldon gathered the data needed to perfect psychohistory — by visiting different cultures spread across the planet Trantor. By observing a variety of societies, Seldon discovered the common features of human social behaviour needed to make sound predictions. Much as Seldon travelled around Trantor, anthropologists have travelled around the Earth in the last few years, playing

economic games in small-scale societies. Human nature as gauged by the games varies considerably from culture to culture — data that must be incorporated into any effort to forecast the social future.

Asimov's greatest criticism of society is that it doesn't change but seems to follow a predictive path. Asimov believes that society or humanity remains unchanged as people will always be greedy, selfish, envious and a slave to a hosts of negative attitudes. More precisely, he does not believe that scientific advances will entail any changes in men's mutual relationships: "Hate, love, fear, suspicion, passion, hunger, lust ... these will not change while mankind remains;" history repeats itself (in large outline at least) "with surprising specificity" (Asimov, 277). As people remain the same and are therefore predictable, this makes his concept of psychohistory a possible science, and can be viewed as a criticism of human nature and society. The 'progress' in science or civilization doesn't seem to affect these basic human instincts. Asimov calls for a better understanding of human behaviour and interaction in order to affect a positive change in humanity.

As mentioned, Asimov's concern is never only for a particular society or a particular time or a particular class. His social consciousness rises above these particulars and engages and encompasses all of humankind. Rita Colwell, former director of the National Science Foundation, echoes the

concerns of Asimov in stating that, "It's become pretty obvious from 9/11, from terrorism, that we need to understand human behaviour better...Not only for prediction, but also for prevention." (qtd. in Seigfried, n.pag)This illustrates the need for today's psychohistoric collaborations to grapple with real people in the real world to find true laws governing human behaviour. Rather than depending exclusively on quantitative analysis, the method relies on a "theory of mind" -- defined by cognitive scientists as humans' innate ability, evolved over millions of years, to judge others' changing ways of thinking, their understandings, their intentions, their pretences. It is a judgment faculty, quite different from our quantitative faculties. Robert Boyd, an anthropologist from UCLA, also urges the need for collaboration to find the true laws that govern human behaviour and feels that it is not acceptable that "the economists are happy with their world and the sociologists are happy with their world, and that this persists in an institution which is supposed to be about getting at the truth."

Asimov is pointing out in his works that society does not really improve with the so-called 'progress' in science and culture. In fact, he believes that at a certain point in civilization, stagnation and complacency occurs. This eventually leads to the downfall of a civilization. Without the improvements in the quality of human thought and relations, all other

progressions come to a halt after reaching a certain level. In *Foundation*, we see an example of this belief when Lord Dorwin, the Chancellor of the Empire came to Terminus to inspect the Foundation and deal with the problems it is facing with the aggressive neighbouring planet, Anachreon. Lord Dorwin, a noble and a highly ranked scholar and academician, is also an archaeologist researching the origin of the human race. In this fictional, futuristic world, man has occupied millions of planets and the fact that he used to occupy just one planet, earth, has been forgotten. In an interesting conversation between Salvor Hardin and the Chancellor on the subject of the "Owigin Question" (the Chancellor speaks in overprecise statements leaving out all the r's), Asimov's critique of contemporary academia and academic language is quite apparent:

> [Dorwin] The "Owigin Question". The place of owigin of the human species, y'know. Suahly you must know that it is thought that owiginally the human wace occupied only one planetawy system.
>
> [Hardin] And what does Lameth say?
>
> [Dorwin] Well, he goes off along a new twail completely. He twies to show that ahcheological wemains on the thuhd planet of the Ahchutuwian System show that humanity existed theah befoah theah, wah any indication of space twavel.
>
> [Hardin] And that means it was humanity's home planet?

> [Dorwin] P'haps. I must wead it closely and wigh the evidence befoah I can say foah cuhtain. One must see how weliable his obsuhvations ah. (65)

The book referred to, was written by Lameth eight hundred years earlier, and was in turn based on an even earlier book by Gleen:

> [Hardin] Then why rely on him? Why not go to Arcturus and study the remains for yourself?
>
> [Dorwin] Why? Whatevah foah my deah fellow?
>
> [Hardin] To get the information firsthand, of course.
>
> [Dorwin] But wheah's the necessity? It seems an uncommonly wound about hopelessly wigmawolish method of getting anyweahs. Look heah now. I've got the wohks of all the old mastahs-the gweat ahcheologist of the past. I wighthem against each othah-balance the disagweements-analyse the conflict statements-decide which is pwobably cowwect-and come to a conclusion. That is the scientific method. (66)

Hardin, unimpressed, mutters inaudibly to himself, "Scientific method, hell! No wonder the Galaxy was going to pot" (ibid). These are the kind of pseudo-scientific beliefs and stagnation of thought and growth that Asimov rages against both in his life and his work.

In the end, better-informed public policy is what human science should be about according to Asimov. It's an old dream, predating Asimov's psychohistory by centuries. Many philosophers have envisioned laws of

human behaviour analogous to Isaac Newton's laws of motion. Early sociologists discovered mathematical regularities in birth and death rates and height and weight and even in crime rates. Past efforts have been far from perfect but science today has much more to work with — the mathematics of statistical physics, economic game theory and networks merged with modern neurobiology, brain scanning and anthropological experiments. All these tools and the new scientific fields built with them suggest that the efforts of earlier centuries were not misguided, just premature. Tom Siegfried, science editor for The Dallas Morning News, writes in Jewish World Review that:

> It's becoming clear that Asimov's psychohistory reflects an undoubtable truth that all the world's different social networks interact in multiple ways to generate a single future. From people to corporations, cities to governments, all the pieces of society must mesh. What appears to be the madness of crowds must ultimately have a method, a method that science can discover. (n.pag)

Seigfried's comment is an appropriate summation of the importance of Asimov's psychohistory in the present world. Like many others, he too is acutely aware of the need for a better understanding of social interactions so as to prevent a decay that is predicted by Asimov in the *Foundation Trilogy.* By underlining the possible usage of the fictional mathematical concept of psychohistory, he is also validating Asimov's criticism of the present day

society and its lack of awareness of itself. The preoccupation of contemporary society with only the material or physical qualities of life and terming it as "progress" is a major issue of concern with Asimov. The Foundation Trilogy is an assertion for the need to also progress internally so as to have a better insight into the "madness" that is the modern world.

Chapter III: The *Foundation Series* and Marxist 'Historical Materialism'

The basis of the fictional science of psychohistory and its possible usage stems from the theory that history moves in cycles. This is by no means a new or unique concept that has been theorized and developed by Asimov. Ancient civilizations like the Aztecs and the Egyptians also believed that time moves in cycles, an idea of time and history which has influenced poets like Arnold Toynbee and W. B. Yeats. The concept basically states that history has certain natural laws in which it moves in a predictive cycle where civilizations are born and then decay after reaching a certain point. The end of one civilization gives birth to a new one which grows and matures to a certain period, dies out again, thus following the

predictive path and completing the cycle. Upon looking into the history of mankind's past, civilizations have flourished and disappeared and given birth to new ones. Edward Gibbon's in *The History of the Decline and Fall of the Roman Empire*, analyses the birth and death of the Roman Empire. Asimov's universe in the foundation stories is modelled after the political structure of the Roman Empire presented in Gibbon's book. According to Jean Fielder, one of the greatest influences on Asimov's Foundation novel is Gibbon's *The History of the Decline and Fall of the Roman Empire*. This parallel is most discernible as Foundation depicts the gradual disintegration of a great empire, the concomitant rise in regional trade, and the eventual consolidation of political and economic power in the trading city- (or planet-) states. And, like a history, "*Foundation* focuses on mass movements rather than on individual actions" (Fiedler 59).

In *Foundation*, the Galactic Empire is the gradually disintegrating great empire, just as the Roman Empire is the disintegrating empire in Gibbon's work. And, as in Gibbon's history, the Foundation builds a trading empire that later unites the planets together. Though many popular histories seem to focus on the empire-builder's military conquests, in *Foundation* however, Asimov's history of the future "makes the cogent point that the true tools of empire-building are economic and socio-political development"

(Fielder 57). This principle is shown through the use of the Seldon Crises. Most often, the resolutions to these crises are a unique mix of psychological manipulation and technological usage. For example, the Galactic religion provides a means of psychologically manipulating the people of the galaxy to become dependent upon the technological sophistication of the Foundation. This underlying concept in the *Foundation Series*, the concept of history, is very similar with one of the main ingredients of Marxism–historical materialism.

Marxism is an economic and social system based upon the political and economic theories of Karl Marx and Friedrich Engels. Marxism is summed up in the Encarta Reference Library as "a theory in which class struggle is a central element in the analysis of social change in Western societies" (n.pag.). Marxism is the antithesis of capitalism which is defined by Encarta as "an economic system based on the private ownership of the means of production and distribution of goods, characterized by a free competitive market and motivation by profit" (ibid).

According to Marx a class is defined by the relations of its members to the means of production. He proclaimed that history is the chronology of class struggles, wars, and uprisings. Under capitalism, Marx continues, the workers, in order to support their families are paid a bare

minimum wage or salary. The worker is alienated because he has no control over the labour or product which he produces. The capitalists sell the products produced by the workers at a proportional value as related to the labour involved. Surplus value is the difference between what the worker is paid and the price for which the product is sold. An increasing dissatisfaction of the proletariat occurs as the result of economic recessions; these recessions result because the working class is unable to buy the full product of their labours and the ruling capitalists do not consume all of the surplus value. A proletariat or socialist revolution must occur, according to Marx, where the state (the means by which the ruling class forcibly maintains rule over the other classes) is a dictatorship of the proletariat.

Out of the many concepts and philosophies that Marxism has given birth to, concerning all spheres of life, historical materialism is one of the most intriguing. The approach to the study of human development and history in terms of materialism is a unique concept that totally differs from previous approaches:

> The discovery of the materialist conception of history, or rather, the consistent continuation and extension of materialism into the domain of social phenomenon, removed two chief defects of earlier historical theories. In the first place, they at best examined only the ideological motives of the historical activity of human beings, without grasping the

> objective laws governing the development of the system of social relations... in the second place, the earlier theories did not cover the activities of the *masses* of the population, whereas historical materialism made it possible for the first time to study with the accuracy of the natural sciences the social conditions of the life of the masses and the changes in these conditions. (Lenin, 15)

Historical Materialism is the application of Marxist science to historical development. In the Preface to *A Contribution to the Critique of Political Economy*, Marx sums up the fundamental proposition of historical materialism in a sentence: "it is not the consciousness of men that determines their existence, but, on the contrary, their social existence that determines their consciousness" (n.pag.) Historical materialism started from a basic underlying reality of human existence that in order for human beings to survive and continue existence from generation to generation, it is necessary for them to produce and reproduce the material requirements of life. While this may seem obvious it was only with Marx that this was seen as foundation for understanding human society and historical development. "Society does not consist of individuals, but expresses the sum of interrelations, the relations within which these individuals stand" (qtd. in In Defense of Marxism, n.pag.). Marx then extended this premise by asserting the importance of the fact that, in order to carry out production and

exchange, people have to enter into very definite social relations, specifically production relations. To each stage in the development of the productive forces corresponds a certain set of production relations. Production relation means the way people organise themselves to gain their daily bread. Production relations are thus the skeleton of every form of society. They provide the conditions of social existence that determine human consciousness. Production does not get carried out in the abstract, or by entering into arbitrary or random relations chosen at will. Human beings collectively work on nature but do not do the same work; there is a division of labour in which people not only do different jobs, but according to Marxist theory, some people live from the work of others by owning the means of production. How this is accomplished depends on the type of society. Production is carried out through very definite relations between people. And, in turn, these production relations are determined by the level and character of the productive forces that are present at any given time in history. For Marx, productive forces refer to the means of production such as the tools, instruments, technology, land, raw materials, and human knowledge and abilities in terms of using these means of production:

> It is always the direct relationship of the owners of the conditions of production to the direct producers--a relation always naturally

> corresponding to a definite stage in the development of the methods of labour and thereby its social productivity--which reveals the innermost secret, the hidden basis of the entire social structure, and with it the political form of the relation of sovereignty and dependence, in short the corresponding specific form of the state. (ibid)

The historical materialist theory of history, also synonymous to "the economic interpretation of history" (Bernstein, 265), looks for the causes of societal development and change in the collective ways humans use to make the means for living. The social features of a society (social classes, political structures, ideologies) derive from economic activity; "base and superstructure" is the metaphoric common term describing this historic condition. Writers such as Asimov who identify with historical materialism usually postulate that society has moved through a number of types or modes of production. That is, the character of the production relations is determined by the character of the productive forces; these could be the simple tools and instruments of early human existence, or the more developed machinery and technology of present age. The main modes of production Marx identified generally include primitive communism or tribal society, ancient society, feudalism and capitalism. In Asimov's *Foundation,* the Seldon Plan predicts the fall of the decadent First Galactic Empire, the

rise of the Traders and Merchant Princes and the growth of the First Foundation- a post-industrial, bureaucratic-technological society. In each of these social stages, people interact with nature and produce their living in different ways. Any surplus from that production is allotted in different ways. Ancient society was based on a ruling class of slave owners and a class of slaves; feudalism based on landowners and serfs; and capitalism based on the capitalist class and the working class. The capitalist class privately owns the means of production, distribution and exchange (e.g. factories, mines, shops and banks) while the working class live by exchanging their socialized labour with the capital class for wages. Society moves from stage to stage when the dominant class is displaced by a new emerging class, by overthrowing the political shell that enforces the old relations of production no longer corresponding to the new productive forces. This takes place in the superstructure of society, the political arena in the form of revolution, whereby the underclass liberates the productive forces with new relations of production, and social relations, corresponding to it.

Marx's clearest formulation of his "Materialist Conception of History" was in the 1859 Preface to his book, *A Contribution to the Critique of Political Economy*:

> The totality of these relations of production constitutes the economic structure of society, the real foundation, on which arises a legal and political superstructure and to which correspond definite forms of consciousness. The mode of production of material life conditions the general process of social, political and intellectual life. It is not the consciousness of men that determines their existence, but their social existence that determines their consciousness. At a certain stage of development, the material productive forces of society come into conflict with the existing relations of production or — this merely expresses the same thing in legal terms — with the property relations within the framework of which they have operated hitherto. From forms of development of the productive forces these relations turn into their fetters. Then begins an era of social revolution. The changes in the economic foundation lead sooner or later to the transformation of the whole immense superstructure. In studying such transformations it is always necessary to distinguish between the material transformation of the economic conditions of production, which can be determined with the precision of natural science, and the legal, political, religious, artistic or philosophic — in short, ideological forms in which men become conscious of this conflict and fight it out. (53)

Historical materialism represented a revolution in human thought, and a break from previous ways of understanding the underlying basis of change within various human societies. The theory shows what Marx called a

"coherence" in human history, in which each generation inherits the productive forces developed previously and in turn further develops them before passing them on to the next generation. Further this coherence the more the productive forces develop and expand, the more they bind people together in production and exchange.

This understanding counters the notion that human history is simply a series of accidents, either without any underlying cause or caused by supernatural beings or forces exerting their will on society. This posits that history is made as a result of struggle between different social classes rooted in the underlying economic base.

According to Charles Elkins, the perspective of historical materialism entails the assertion of over-riding historical laws.

> In its cruder versions, it involves the old puzzle of historical inevitability (predestination) versus free will, which itself flows out of the often unsuccessful yet desperately necessary, and therefore always repeated, struggles of men to control their personal futures and the future of their societies. (28)

These ideas are shown throughout Foundation, and in fact are the basis behind most of the heroic characters. Characters like Hober Mallow,

Salvor Hardin, and Limmar Ponyets epitomize men who struggle to control their futures. These men devote their lives to doing their part to help Seldon's Plan to be a success, but in reality, they are a planned part of Seldon's plan to help the Foundation succeed. The "random" choices these men make are all predetermined by Seldon's mathematical computations. Thus, these men try to control a future which has already been determined for them (Elkins 105).

In *Foundation and Empire*, the discussion of freedom versus necessity between the old, powerless patrician, Ducem Barr, who understands the implications of Seldon's Plan, and the eager, ambitious and headstrong General of the Galactic Empire, Bel Riose, goes as follows:

> [Barr] Without pretending to predict the actions of individual humans, (Seldon's Plan) formulated definite laws capable of mathematical analysis and extrapolation to govern and predict the mass action of human groups....
>
> [Riose] You are trying to say that I am a silly robot following a predetermined course of destruction.
>
> [Barr] Do whatever you wish in your fullest exercise of freewill. You will still lose.
>
> [Riose] Because of Hari Seldon's dead hand?
>
> [Barr] Because of the dead hand of the mathematics of human behavior that can neither be stopped, swerved, nor delayed.

Bel Riose, unwilling to accept that he was part of a predetermined fate struggles against Seldon Plan only to realise in an Oedipus-like irony that he was actually facilitating the workings of it. The logic of history is equated with the logic of the natural sciences. Bayta, in *Second Foundation* says:

> The laws of history are as absolute as the laws of physics, and if the probabilities of error are greater, it is only because history does not deal with as many humans as physics does atoms, so that individual variations count for more. (77)

This is a fascinating concept with clear conceptual parallels with classical Marxism. Donald Wollheim in *The Universe Makers* (1971) observes that

> Asimov took the basic premise of Marx and Engels, said to himself that there was a point there [i.e. in Marxism] -- that the movements of human mass must be subject to the laws of motion and interaction, and that a science could be developed based upon mathematics and utilizing all the known data...(41).

In his speech at Marx's funeral, Frederick Engels asserted that

> Just as Darwin discovered the law of evolution in organic nature, so Marx discovered the law of evolution in human history.... Marx also discovered the special law of motion governing the present-day capitalist method of production and the bourgeois society that this method of production has created. (39)

Similarly, just as Seldon concentrates not on the individual but the masses, so also Lenin says:

> Historical materialism made it possible for the first time to study with scientific accuracy the social conditions of the life of the masses and the changes in these conditions..... Marx drew attention and indicated the way to a scientific study of history as a simple process which, with all its immense variety and contradictions, is governed by definite laws. (13)

It is this concept, that history has "definite laws" which cannot only be made intelligible but can give insight into the course of future historical events, which so intrigues both the readers of the *Foundation* novels and those who study Marxism. Moreover, whether embodied in Seldon's Plan or the concept of historical materialism, this idea is the very essence of drama for it inevitably "raises the question of human free will versus historical determinism, a problem fraught with dramatic tension from Sophocles's *Oedipus Rex* through to the present." Time and again, just as "Oedipus and Sophocles' audience come to understand the power of Apollo over man's destiny, Asimov's characters and readers come to comprehend the full implications of "Psycho-Historical Necessity" (Elkins, 29-30).

This dilemma—given a predetermined outcome, to act or not to act—is exactly what Asimov's characters experience. It generates the dramatic tension in his novels. The hero of the First Foundation, Salvor Hardin,

decides to wait until the "crisis" itself (an attack by another planet) limits his choice to one and only one course of action. By contrast, other characters, such as Bel Riose and Dr. Darell, resist the implications of the Plan and of historical inevitability:

> ...he (Darell) knew that he could live only by fighting that vague and fearful enemy that deprived him of the dignity of manhood by controlling his destiny; that made life a miserable struggle against a foreordained end; that made all the universe a hateful and deadly chess game (14).

Ultimately, resistance is futile as all actions merely confirm the inevitability of Seldon's Plan. The eventual collapse of the civilization and other important foreseen events which come under the calculation of Seldon's psychohistory are all part of what is called Seldon's Plan. The fall of the Galactic Empire is similar to the predicted fall the capitalist society. This sense of inevitability is expressed by Nikolai Bukharin in his book *Historical Materialism*:

> society and its evolution are as much subject to natural law as is everything else in this universe... Socialism will come inevitably because it is inevitable that men, definite classes of men, will stand for its realization, and they will do so under circumstances that will make their victory certain (46).

Wollheim is the first to point out the probable Marxian "influence" on Asimov. Asimovs' parents immigrated from Russia in 1923, six years after the October Revolution. So Asimov, Wollheim feels, must have been aware of Soviet Marxism. Moreover, in 1939, the year Asimov began writing his future history, was the year of the Soviet-Nazi Pact, which he described in *The Early Asimov: Book One*, along with how he was caught up in the events unfolding in Europe. Though Asimov does not mention any involvement in radical politics, Sam Moskowitz credits him with helping to found the Futurian Science Literary Society in 1938, a society which James Blish says "was formed exclusively for those who were either actual members of the Communist Party or espoused the Party's policies" (87). The members "did endorse the Marxist view of change, or whatever version of it the American CP was wedded to at the time" (183).

The comparison between Marxist Historical Materialism and Asimov's concept of Cyclical History has come under some criticism especially from Charles Elkins. Being an ardent supporter of Marx and his philosophies, he believes that this comparison is another one of the crude misinterpretation of Marxist ideology by people in the west:

> It was precisely this crude conception of historical inevitability culminating in Stalin's widely propagated writings, that dominated the

> thinking of a large majority of American radicals and concerned social activists throughout the Thirties and into the Fifties, in and out of the Communist Party. (Much of Marx's and Engels' writing was still untranslated; the German Marxists' and Antonio Gramsci's works were unknown; most George Lukács' essays were unavailable. What Marxist theory Americans received was basically what was filtered through the USSR under Stalin.) (29)

Elkins opines that what has been generally accepted as Asimov's "underlying concept" in the *Foundation Trilogy*, is nothing but a vulgar and debased version of Marxism promulgated in the 1930s. He argues that Asimov and those that state that his trilogy is representative of Marxist ideology, have not properly understood Marxism and their understanding of it can be termed as "mechanical pseudo-Marxism" (31). This is very different from Wollheim's opinion in *The Universe Makers* that Asimov's concept is the exact science that "Marxism thought it was but never could be" (41). Elkins also objected to the fact that Asimov's concept of history is being hailed as an exact science whereas Marxist ideologists have been very careful to describe their theories as tendencies. Marx warns that his theory of the capitalist mode of production assumes "that the laws of the capitalist mode of production develop in pure form. In reality there is always an approximation" (41). Similarly, Engels writes that no economic law:

> has any reality except as approximation, tendency, average, and not immediate reality. This is partly due to the fact that their action clashes with the simultaneous action of other laws, but partly due to their nature as concepts (42).

Also, in Asimov's books, the fate of the world seems to be in the control of an elite group who are aware of the Seldon Plan whereas in Marxism, the eventual social revolution will bring the control of the world to the great mass of humanity. Besides all this, according to Elkins, the *Foundation* novels give a sense of predestination, of remorseless logic and pervading fatalism but in Marxism, there is a sense of unlimited hope and freedom.

The accusations levied by Elkins on the *Foundation Trilogy*, however, seem to be more aimed at the American misinterpretation of the Marxist ideologies. Asimov himself never claimed the concept in his novels to be an exact science. Also, the observation of the "elite" by Elkins as the controllers of human destiny is a fallacious observation. All the main characters in the trilogy, though aware of the Seldon Plan, are not able to make changes to it nor manipulate it to suit themselves. Their awareness of the plan always requires them to make great personal sacrifices for the benefit of humanity. What Elkins seems to have confused is the fact that, Asimov's trilogy is not a history book or one of pure political ideology. The fatalism that pervades

in Asimov's trilogy is simply a criticism of a society that refuses to learn from its past and seem to carry on towards the same demise suffered by its predecessors. According to Kapel, in his essay, "Return to Solecism:"

> Mark Twain and Isaac Asimov were astute observers of the human condition, and, although they understood people well enough to know that nothing would be done, they left us with their observations of what could be done (n.pag.).

From a Marxian perspective, Asimov's depiction of the particular future embodied in the "Foundation" stories is an accurate reflection of the material and historical situation in the 1930's and 40's, out of which these works arose which is the alienation of men and women in modern bourgeois society. For Marxists, alienation describes a situation in which the creations of people's minds and hands—whether they be goods or complex social systems—stand over against and dominate their creators. Alienation is a consequence of man's impotence before the forces of nature and society, and of his ignorance of their operations. Alienation abates to the extent that man's knowledge and powers over nature and his social relations are increased. Thus, in one sense, Asimov's Foundation Trilogy endures because of its fatalistic perspective. It accurately sizes up the modern situation. Reading these novels, the reader experiences this fatalism which, in a

Marxist analysis, flows from his own alienation in society and his sense of impotence in facing problems he can no longer understand. In this context, the solutions in the Foundation Trilogy which Asimov puts in the hands of a techno-bureaucratic elite can be easily related to by the modern reader.

Chapter IV: Humanity, Humanism and the Religious Discontent

Asimov, besides being a science fiction writer, was also a prominent humanist. He was the president of the American Humanist Association for eight years starting from 1985. His humanistic work and concern for the welfare of humanity is well documented by authors such as Thomas Gunn, Janet Asimov, J. Joseph Miller and others. Asimov himself wrote many non-fictional books in which he criticises many aspects of human beliefs and superstitions that he regarded as detrimental and harmful to society. His fiction also cannot be truly separated from his beliefs as again and again his philosophies and critique of society keep reappearing in his stories. The *Foundation Series* and the *Robot Series*, has been interpreted by many critics as Asimov's attempt at pointing out inherent problems besetting humanity and finding solutions to these problems. Throughout his life, he has been greatly preoccupied with solving the many ills plaguing mankind and this is

also a major concern of most of his main characters. His plots usually revolve around certain moral predicaments and the actions of the characters are often guided by what benefits mankind most. Having lived through the most turbulent times in history, (the 2nd World War, the atomic bomb and the Cold War) he is acutely aware of the cruelties and destructiveness that man is capable of. Therefore, it is of no surprise that he has such a deep and fervent concern for humanity.

Because of this concern, Asimov has attacked many beliefs and aspects of society that are fanatically held as sacred by the modern world; most prominently nationalism and religion. He considers these two to be archaic, superstitious and illogical notions that have been responsible for many human atrocities. In his essay, "The Humanism of Isaac Asimov; Prophet of the Rightness and Power of Knowledge," humanist advocate, Ross Hamilton Henry writes:

> ...many of us, along with Dr. Asimov, think that the true salvation of individuals, and ultimately of our civilization, is in turning away from the credulous beliefs and delusions offered by ancient wonder stories and myths with their inflexible absolutes and the intolerances that they inevitably espouse. (n.pag.)

In *I, Asimov: A Memoir,* Asimov expresses the dire need for the world to rethink its views on culture and nationalism, reconsider its priorities and to work together for the salvation of humanity:

> The Earth should not be cut up into hundreds of different sections, each inhabited by a self-defined segment of humanity that considers its own welfare and its own "national security" to be paramount above all other consideration...I am all for cultural diversity and would be willing to see each recognizable group value its cultural heritage. I am a New York patriot, for instance, and if I lived in Los Angeles, I would love to get together with other New York expatriates and sing "Give My Regards to Broadway."...This sort of thing, however, should remain cultural and benign. I'm against it if it means that each group despises others and lusts to wipe them out. I'm against arming each little self-defined group with weapons with which to enforce its own prides and prejudices...The Earth faces environmental problems right now that threaten the imminent destruction of civilization and the end of the planet as a livable world. Humanity cannot afford to waste its financial and emotional resources on endless, meaningless quarrels between each group and all others. there must be a sense of globalism in which the world unites to solve the real problems that face all groups alike...Can that be done? The question is equivalent to: Can humanity survive? ...I am not a Zionist, then, because I don't believe in nations, and because Zionism merely sets up one more

> nation to trouble the world. It sets up one more nation to have "rights" and "demands" and "national security" and to feel it must guard itself against its neighbors...There are no nations! There is only humanity. And if we don't come to understand that right soon, there will be no nations, because there will be no humanity (n.pag.)

It is exactly this "sense of globalism", the urgent need for the world to unite and "solve the real problems that face all groups alike", that Asimov and the main characters of his stories are most involved in.

Being a humanist, Asimov's concerns are for humanity as a whole, but the problem of clearly pinpointing what is humanity or what can be done or averted for its good, is a dilemma faced by his characters as well as Asimov himself, and others with humanistic concerns like him. In *End of Eternity* and *Robots and Empire*, the greatest difficulty with finding solutions for the problems of humanity is to first identify what exactly is humanity, and then how to go about finding means for its benefit. In the first novel, humans have discovered a place called Eternity where they can observe the past and also travel in time with the appropriate equipments. Initially, Eternity was used only for trade and travel but some of its residents saw the enormous potential for good. In an immense moral gesture, the Eternals, as they call themselves, decide to travel to strategic moments in the

past and make subtle changes so as to prevent humankind's greatest tragedies. However, by doing so, they soon realize that they are also eradicating its greatest achievements. Mankind has a way of accomplishing its greatest achievements only when forced upon by crisis and tragedies. The conversation between Harlan, the hero, and Noys present this very dilemma. Noys tries to convince Harlan to destroy Eternity saying that it delays the discovery of hyperspace travel for one and a quarter million years and by the time humans move out into space, all the planets would have been occupied by younger species from other planets. Thus, mankind would eventually die out. Harlan believes that the problem can simply be fixed. He points out that the Eternals "have not yet failed to achieve the greatest good in all those centuries we could reach" (186). An enraged Noys retorts:

> "The greatest good?" asked Noys in a detached tone that seemed to make a mockery of the phrase. "What is that? Your machines tell you. Your Computaplexes. But who adjusts the machines and tells them what to weigh in the balance? The machines do not solve problems with greater insight than men do, only faster. Only faster! Then what is it the Eternals consider good? I'll tell you. Safety and security. Moderation. Nothing in excess. No risks without overwhelming certainty of an adequate return." (186)

Noys understands the paradoxical nature and tragedy of humankind better than Harlan. He continues:

> In ironing out the disasters of Reality, Eternity rules out the triumphs as well. It is in meeting the great tests that mankind can most successfully rise to great heights. Out of danger and restless insecurity comes the force that pushes mankind to newer and loftier conquests. Can you understand that? Can you understand that in averting the pitfalls and miseries that beset man, Eternity prevents men from finding their own bitter and better solutions, the real solutions that come from conquering difficulty, not avoiding it. (186-87)

Asimov realises that simply focusing on stability and security does not necessarily serve humanity best: sometimes short-term pains are necessary for much greater long-term gains. In *Foundation*, the main characters always allow crises to run their course and they do nothing until there is no choice but to act and this act would be exactly as Seldon has calculated as being the best course of action for mankind.

In *Robots and Empire*, the problem of identifying humanity again arises. Asimov's treatment of robots is very different from other science fiction authors. In most other science fiction novels about robots, the ending is always Frankenstein-like with the artificial beings leading humans to

disaster. However, Asimov feels that robots are tools, and their purpose can only be one of service to humanity. He develops the famous Three Laws of Robotics to safeguard robots from turning against humans:

> 1. A robot may not injure a human being, or, through inaction, allow a human being to come to harm.
>
> 2. A robot must obey the orders given it by human beings except where such orders would conflict with the First Law,
>
> 3. A robot must protect its own existence as long as such protection does not conflict with the First or Second Laws. ("Story," vii-xvi)

Asimov's best robot stories involve ambiguities in interpreting these Three Laws. The laws remain unchanged for several centuries in Asimov's universe. It is not until *Robots and Empire* that a change is made to these laws and this change is profoundly significant. The First Law of Robotics states that – "A robot may not injure a human being, or, through inaction, allow a human being to come to harm" (353). This law is debated by two robots, R. Daneel Olivaw and R. Gistard Reventlov. Daneel observes that "*...the tapestry of life is more important than a single thread...that humanity* is more important than a single human being" (353). So they decide to formulate a new law known as the Zeroth Law in which the robots main concern will be the service of humanity:

> There is a law that is greater than the First Law: "A robot may not injure humanity or, through inaction, allow humanity to come to harm." I think of it now as the Zeroth Law of Robotics. The First Law should then be stated: "A robot may not injure a human being or, through inaction, allow a human being to come to harm, unless this would violate the Zeroth Law of Robotics." (353)

The Zeroth Law represents a shift away from the narrow focus on the individual and towards a concern for humanity. The immediate problem that both Daneel and Giskard face is that, while picking out individual human beings and deciding what might harm them is reasonably easy, picking out "humanity" and identifying harm to it is much harder. Asimov returns to this problem frequently; it will be a question that troubles Daneel for thousands of years. Immediately after articulating the Zeroth Law Daneel is asked:

> But what is your "humanity" but an abstraction? Can you point to humanity? You can injure or fail to injure a specific human being and understand the injury or lack of injury that has taken place. Can you see an injury to humanity? Can you understand it? Can you point to it? (353)

It is exactly these questions that the later *Foundation* Series attempts to answer, and the development of psychohistory is paramount in being able to determine the courses of action that will most benefit humanity. Giskard says to Daneel that:

> It is not sufficient to choose, then, friend Daneel. We must be able to shape. We must shape a desirable species and then protect it, rather than finding ourselves forced to select among two or more undesirabilities. But how can we achieve the desirable unless we have psychohistory, the science I dream and cannot attain? (428)

The robots themselves are unable to develop the complex statistical science but are aware of its immense potential. It is only much later, Daneel meets Hari Seldon and manages to manipulate him into developing a method for making psychohistory useful.

Asimov's humanism is the driving force behind the themes and plots of his major novels. Humanism is a European phenomenon and its philosophy seeks to dignify and ennoble man. As Cuddon observes:

> At its best, humanism helped to civilize man, to make him realize his potential powers and gifts, and to reduce the discrepancy between potentiality and attainment. (403)

Asimov became the president of the American Humanist Association or AHA in the spring of 1985, following his election to its board of directors late in 1984. Earlier in 1984, he had received the association's highest annual honour, the Humanist of the Year Award. However, Asimov's earliest

involvement with AHA dates back to almost a decade earlier, when in 1976 he joined with such noted scientists as Hudson Hoagland, George Gaylord Simpson, Chauncey Leake, and Linus Pauling in sponsoring a national education campaign promoted by AHA. *A Statement Affirming Evolution As a Principle of Science*, adapted from an earlier text written by Hermann J. Muller, Nobelist and former AHA president, was sent to every major school district in the United States. The text included the signatures of hundreds of leading scientists, educators, and civic and religious leaders and called upon school boards and educators to oppose the demands to include Creationism in science texts and classroom discussions. Creationists argued that fairness itself dictated that all "scientific theories" should be given "equal time and emphasis" in biology classes. In his criticism of those that advocate creationistic beliefs, Asimov says, "Creationists make it sound as though a 'theory' is something you dreamt up after being drunk all night" (Asimov Quotes, n.pag.)

Humanists believe that humans alone are responsible for the problems and achievements of society. In his essay, "What is Humanism?", noted humanist, Austin Cline quotes the entry on humanism in *The Encyclopaedia of Social Sciences*:

> Humanism as a technical term and as an intellectual or moral conception has always leaned heavily on its etymology. That which is characteristically human, not supernatural, that which belongs to man and not to external nature, that which raises man to his greatest height or gives him, as man, his greatest satisfaction, is apt to be called humanism. Humanism thus means many things. It may be the reasonable balance of life that the early humanists discovered in the Greeks; it may be merely the study of the humanities or polite letters; it may be the freedom from religiosity and the vivid interest in all sides of life of a Queen Elizabeth or a Benjamin Franklin; it may be the responsiveness to all human passions of a Shakespeare or a Goethe; or it may be a philosophy of which man is the center and sanction. (n.pag.)

Humanism can also be better understood when considered in the context of the attitudes or perspectives it is normally contrasted against. On the one hand is supernaturalism, descriptive of any belief system which stresses the importance of a supernatural, transcendent domain separate from the natural world in which we live. Quite often this sort of philosophy describes the supernatural as being more "real" or at least more "important" than the natural, and hence as something we should strive for — even if it means for humans to deny their own needs, values, and experiences in the here and now. "Humanists would believe that neither good nor evil is produced by

supernatural beings, and that the problems of humankind can be solved without such beings" (Seiler & Jenkins, n.pag.). In his autobiography *I, Asimov: A Memoir,* Asimov states:

> I believe in the scientific method and the rule of reason as a way of understanding the natural Universe. I don't believe in the existence of entities that cannot be reached by such a method... and that are therefore 'supernatural.' I certainly don't believe in the mythologies of our society, in heaven and hell, in God and angels, in Satan and demons.... Humanists believe that human beings produced the progressive advance of human society and also the ills that plague it. They believe that if the ills are to be alleviated, it is humans that will have to do the job. They disbelieve in the influence of the supernatural on either the good or the bad of society, on either its ills or the alleviation of those ills. (498)

For Asimov, religion is seen as a means of social oppression. He is of the opinion that God is created by man and agrees with Alexander Pope that "...the proper study of mankind is man." As Asimov puts it, "...I am incapable of accepting that existence on faith alone" (Asimov, 301). Asimov sums up his religious views by saying "I don't have the evidence to prove that God doesn't exist, but I so strongly suspect that he doesn't that I don't want to waste my time" (qtd. in Corvallis Secular Society, 1997). His novels reflect his view of religion as a tool for manipulating and controlling the

ignorant and uneducated. Although born of Jewish parents, Asimov took great interest in Christianity, the major religion of his country and moreover, the Bible, to the point of publishing a two volume book entitled *Asimov's Guide to the Bible.* In his book *Gold* published in 1995, Asimov gives his views of science fiction and religion:

> I tend to ignore religion in my own stories altogether, except when I absolutely have to have it. ...and, whenever I bring in a religious motif, that religion is bound to be seem vaguely Christian because that is the only religion I know anything about, even though it is not mine. An unsympathetic reader might think that I am "burlesquing" Christianity, but I am not. That too, it is impossible to write science fiction and *really* ignore religion (297-302)

Christianity is parodied in a negative light in *Foundation.* The religion is described as follows:

> ...all this talk of about the Prophet Hari Seldon and how he appointed the Foundation to carry on his commandments that there might someday be a return of the Earthly paradise: and how anyone who disobeys his commandments will be destroyed for eternity. They believe it. (103)

In his essay, *Religion in Asimov's Writings,* Michael Brummond states that:

> The parallelism to Christianity is apparent: the Prophet Hari Seldon represents Jesus Christ, the Foundation is organized religion, the

> commandments are similar to those given to Moses in the old testament, the Earthly paradise is Heaven, and to be destroyed for eternity is the Christian idea of Hell (n.pag.)

Within the novel *Foundation* itself, the religion is summed up as follows:

> The religion-- which the Foundation has fostered and encouraged, mind you-- is built on strictly authoritarian lines. The priesthood has sole control of the instruments of science we have given Anacreon, but they've learned to handle these tools only empirically. They believe in this religion entirely and in the ...oh...spiritual value of the power they handle...The Foundation has fostered this delusion assiduously (106-107).

In the novel, the people of Foundation are the only ones left in the universe with knowledge of the science and technology of the past. All the other planets have disintegrated into some form of barbarism or the other. Foundation imparts some of its knowledge and technology to its neighbouring planets but only as some sort of "magical sorcery". Thus Foundation started a religion in which Hari Seldon is elevated to the role of a god and saviour, and Salvor Hardin becomes something akin to a pope. Citizens from the other planets are taught the basic fundamentals on how to run the "holy" machines that are given by the Foundation and they are given the garb of priests:

> It started that way at first because the barbarians looked upon our science as a sort of magical sorcery, and it was easiest to get them to accept it on that basis. The priesthood built itself and if we help it along we are only following the line of least resistance (86).
>
> To the people of Anacreon he was high priest, representative of that foundation which, to those 'barbarians' was the acme of mystery and the physical center of this religion they had created-- with Hardin's help-- in the last three decades (89).

These, more or less, exemplify Asimov's view on religion. Religion is nothing more than a "barbaric" superstition and a mere delusion that is used for the control and manipulation of masses by a small minority. Though in *Foundation* it is used to maintain order in a universe gradually disintegrating into chaos, in real life, Asimov believes it has done more harm than good. Asimov's believes that "To surrender to ignorance and call it God has always been premature, and it remains premature today." Asimov also said:

> I would not be satisfied to have my kids choose to be religious without trying to argue them out of it, just as I would not be satisfied to have them decide to smoke regularly or engage in any other practice I consider detrimental to mind or body (qtd. in Corvallis Secular Society, 1997).

One of the most apparent similarities between Asimov's own beliefs and his fictional work comes in the area of life after death. Asimov says:

> It is entirely because such thoughts are so comforting and so exhilarating, and so remove us from the otherwise dreadful thought of death, that the afterlife is accepted by the vast majority, even in the absolute absence of any evidence for its existence (332).

He believes that the fear of death makes people accept religion so as to convince themselves that death is not the end. Asimov has been quoted as saying, "Life is pleasant. Death is peaceful. It's the transition that's troublesome." One of Asimov's greatest objections to God stems from his objection to the idea of the afterlife. Asimov says:

> I would also want a God who would not allow a Hell. Infinite torture can only be a punishment for infinite evil, and I don't believe that infinite evil can be said to exist even in the case of a Hitler. (334).

In one of his short stories, "The Last Question" from *Robot Dreams,* humankind has evolved into one mind, free of body and co-exist with a super computer in hyperspace. This super computer is known as a Multivac and called AC for short. AC is repeatedly asked if the winding down or loss of energy in the universe or entropy can be reversed. The story progresses

through eons and each time the Multivac is asked the question if entropy can be reversed, it always has the same answer that not enough data is available. In the end, after humankind linked up with the super computer in a bodiless entity in hyperspace, the universe comes to an end. As man fades out, the super computer suddenly realises how to reverse entropy:

> And it came to pass that AC learned how to reverse the direction of entropy. But there was now no man to whom AC might give the answer of the last question. No matter. The answer--by demonstration--would take care of that, too. For another timeless interval, AC thought how best to do this. Carefully, AC organized the program. The consciousness of AC encompassed all of what had been a Universe and brooded over what was now Chaos. Step by step, it must be done.
>
> And AC said, "LET THERE BE LIGHT!"
>
> And there was light. (246)

This incredible science fiction story has the underlying theme that man created God, and that the problems of society can be solved only by man, or man's creation, and that a supernatural being is not needed. This is a direct representation of Asimov's humanist beliefs. The use of religion is not intended, according to Asimov, to burlesque religion, but to profess his beliefs against the existence of a god, or an afterlife.

Asimov's great concern for humanity made him a Humanist and this in turn made him object to many prevailing social institutions such as religion. Of his contribution as a Humanist, Hamilton writes:

> For me Isaac Asimov exemplifies what a humanist should be, not a perfect paragon of virtue, but a perfectly fallible human being who lived his life in a humanistic fashion. I do not consider Dr. Asimov any sort of humanistic messiah, only an honorable and good man, a brilliant and prolific writer, and an obvious example of what a humanist can aspire to be. If we do not honor our own Humanistic "saints" and attempt to keep their memory and example alive, then we deserve the neglect and the lack of notice usually paid to us by the rest of the world. And we should not expect others to notice that persons of great moral fiber and exemplary character are found outside of the mainstream religious movements. We need to refute the suppositions make by national leaders like Joseph Lieberman, that it is not possible to lead a moral life without God and religion to keep us on the straight and narrow. (3)

Asimov has always stood for honesty. In his views on religion and nationalism, he believes that he is only projecting a truth that others are too afraid or uncomfortable to acknowledge. Much like the robots in his stories, he detaches himself from traditions and sentimentality to get a clearer

understanding of life and see it honestly for what it is. He writes in *Pebble in the Sky*:

> They won't listen. Do you know why? Because they have certain fixed notions about the past. Any change would be blasphemy in their eyes, even if it were the truth. They don't want the truth; they want their traditions.
>
> Never let your sense of morals get in the way of doing what's right.
>
> Part of the inhumanity of the computer is that, once it is competently programmed and working smoothly, it is completely honest. (qtd. in Famous Asimov Quotes, n.pag.)

Asimov aims at making people see what he considers as obvious truths. His work as an author and humanitarian is aimed at achieving these goals:

> It is the obvious which is so difficult to see most of the time. People say 'It's as plain as the nose on your face.' But how much of the nose on your face can you see, unless someone holds a mirror up to you? (ibid).

Asimov always preferred to be labelled a rationalist as opposed to being called an atheist. According to Asimov, being an atheist meant to not believe in anything and he found this to be an inadequate description of his

principles and ideals. He says that he does believe in humanity and the potential of man, and this is far more rational than believing in God.

> I prefer rationalism to atheism. The question of God and other objects-of-faith are outside reason and play no part in rationalism, thus you don't have to waste your time in either attacking or defending (ibid).

Another reason why Asimov attacks religion besides deeming it to be mere superstition, and hence irrational, is due to the hypocrisy of those who stand for it.

> If I were not an atheist, I would believe in a God who would choose to save people on the basis of the totality of their lives and not the pattern of their words. I think he would prefer an honest and righteous atheist to a TV preacher whose every word is God, God, God and whose every deed is foul, foul, foul.
>
> If I am right, then (religious fundamentalists) will not go to Heaven, because there is no Heaven. If they are right, then they will not go to Heaven, because they are hypocrites. (ibid)

Asimov's rejection of religion is based largely on humanitarian grounds. Having seen the hypocrisy that surrounds it and the immense threat it poses to the unity and progress of mankind, Asimov strives to bring to attention

these issues in his works and life. History has shown the prejudice and persecution that man is capable of because of religion and sadly, it persists till today. Asimov believes that for the progress of humanity, such delusions must be left behind and only then can mankind truly come together to find solutions for its existential problems.

Chapter V: Conclusion

Patricia Warrick in an article entitled, "Ethical Evolving Artificial Intelligence: Asimov's Computers and Robots," argues that Asimov's robots are programmed to regard "John Stuart Mill's concept of 'the greatest good for the greatest number'... as the essential element in the criteria for designing the (behaviorist) ideal" (191). Taking this a step further, J. Joseph Miller in his essay, "The Greatest Good for Humanity: Isaac Asimov's Future History and Utilitarian Calculation Problems," argues that Asimov's extended future history as it is articulated in *The End of Eternity*, the *Robot Series* and the *Foundation Series*, and the major social themes in Asimov's social science fiction are ultimately motivated by utilitarianism. Throughout his future history:

> ...Asimov expresses a commitment to promoting the greatest good for all of humanity, an explicitly utilitarian goal. One of the central questions in his fictions is how best to go about in achieving that goal. (Miller, 189).

According to Miller, the progression of the series from the *Robot Series* to the *Foundation Series*, can be read as Asimov's attempt to find solutions to a set of problems faced by utilitarianism that he refers to as calculation problems. Though Asimov himself never claimed that his future history is an exercise in utilitarian moral theory, Miller says, "but that is hardly surprising, for few outside of the world of professional philosophy explicitly attach labels to their moral beliefs." (ibid)

Utilitarianism can be broadly divided into three classes, each with a different thrust to their ideology. Utilitarians such as Bentham, Mill, Peter Singer and David Hume hold that morality really is fundamentally concerned with producing the best overall consequences. The second class includes philosophers like Kant, Locke and Rawls, and they are of the opinion that morality is crucially concerned with the protection of autonomy. The third class of utilitarians, also known as the virtue theorists, which include philosophers like Aristotle, Aquinas, and Nussbaum, hold that character is what counts most in morality. Utilitarianism predicates what is known as a consequential theory i.e. the consequences of an action

determines the rightness and wrongness of the said action. To a utilitarian, a particular course of action is deemed right or wrong if the results of that action produce the maximum positive outcome or happiness than any other course of action available. This simple formulation of utilitarian principle has led to the association of utilitarianism with the slogan, "The greatest good for the greatest number." Utilitarians have, however, objected to this oversimplified slogan as utilitarianism is far more complicated than just what it implies. The first systematic formulation of utilitarianism belongs to Jeremy Bentham, usually credited as its founder, who explains the principle in *The Principles of Morals and Legislation*:

> By the principle of utility is meant that principle which approves or disapproves of every action whatsoever, according to the tendency which it appears to have to augment or diminish the happiness of the party whose interest is in question (190).

Here Bentham advocates maximizing what contemporary philosophers have come to call "expected utility." The idea, according to Bentham, is that the right action is the one that, all things considered, is most likely to produce the best set of consequences. Producing a method for determining exactly which action is most likely to produce the greatest total amount of happiness now becomes the first objective for the utilitarian. Since utilitarianism is a consequentialist theory and thus assesses rightness

and wrongness based upon consequences, the first step for a utilitarian in determining whether an action is the right one to perform is to determine its consequences. The utilitarian principle is beset with a number of problems and objections. One immediate problem is that it relies upon an assessment of the probabilities of various consequences and these probabilities can misfire, sometimes quite seriously, with the result that an action whose expected utility is quite high turns out to be really disastrous. This has resulted in a number of utilitarians wanting to redefine the theory differently. John Stuart Mills states that utilitarianism is:

> "the creed which accepts as the foundation of morals 'utility' or 'the greatest happiness principle' holds that actions are right in proportion as they tend to promote happiness; wrong as they tend to produce the reverse of happiness" (6).

In this definition, the results or consequences of an action are seen as a matter of fact, i.e., the consequences are exactly as intended by the action. This requires that the person committing the act be able to accurately predict the future. The requirement that a utilitarian be able to pick out the best set of consequences gives rise to a number of objections to utilitarianism. In his essay, Miller has identified three major objections to utilitarianism. The first objection is that the number of possible consequences for the right action is too vast, and since the right action cannot be taken until all possible

consequences have been considered, therefore, there is inadequate time to determine all possibilities before the right course of action is chosen and taken. The second objection is that it is extremely difficult to decide which consequences may be the best as different individuals will have a different scale of value for each result. Simply put, what brings great happiness to one may not bring as much happiness to another. Third, even if confined only to maximizing expected utility, it is hard to know with reasonable certainty what the probabilities of each consequence would be. Utilitarians have recognized these problems and have worked out different methods to rectify these problems. Asimov too, recognizes these problems and in his works offers "science-fiction" solution for them.

In the previous chapter, the problem of finding solutions for the benefit of humanity in *The End of Eternity* has been examined. It can be argued that the impulses that transform Eternity from a trade empire into a "benevolent" agent for social improvement are motivated by utilitarian principles since the driving force behind Eternity is preventing misery and producing maximum happiness through stability. Even the reason for ending Eternity itself can be seen as a utilitarian reason as it turns out that humans are better off if freed from the guidance of Eternity or at least there will be more total happiness in the world. Here, Asimov is providing an interesting,

albeit unlikely, way of resolving the first objection to utilitarianism. Since the Eternals operate outside of normal time, they can take as much time as needed to list out all eventual consequences of an action. Also, the third objection to utilitarianism, i.e., the difficulty of determining of the probabilities of certain outcomes, can be resolved in Eternity as the Eternals can actually view the consequences of their work. In *Robots and Empire*, the Zeroth Law is very similar to utilitarianism. The change from the First to the Zeroth Law is influenced by the notion that humanity in the abstract can be harmed, that some action can have the effect of making humans in general worse off than they otherwise would have been. At the close of the novel, Daneel encourages Seldon to develop psychohistory as he sees in it a solution that he and Giskard have faced for thousands of years:

> The trouble is, Hari, that a human being is easy to identify. I can point to one. It is easy to see what will harm a human being and what won't-relatively easy at least. But what is humanity? To what can we point when we speak of humanity? And how can we define harm to humanity? When will a course of action do more good than harm to humanity as a whole and how can one tell? (429)

In articulating the problem of defining humanity in order to serve it, Daneel is also stating a utilitarian calculation problem. Psychohistory offers Daneel a solution to this problem:

> When you made your speech to the Decennial Convention, I realized at once that in psychohistory there was a tool that might make it possible to identify what was good and bad for humanity. With it, the decisions we would make would be less blind. I would even trust to human beings to make those decisions and again reserve myself only for the greatest emergencies. (429)

For Daneel, psychohistory is a tool to determine what actions will produce the greatest good for humanity; it is, in effect, a way of solving Daneel's calculation problems. Seldon, at this stage, is still unconvinced whether psychohistiory could predict the future. When asked whether he can predict the future, Seldon explains:

> Not quite, actually. What I have done is much more limited than that. In many systems, the situation is such that under some conditions chaotic events take place. That means that, given a particular starting point, it is impossible to predict the outcomes. This is true even in some quite simple systems, but the more complex a system, the more likely it is to become chaotic. It has always been assumed that anything as complicated as human society would quickly become chaotic and, therefore, unpredictable. What I have done, however, is to show that, in studying human society, it is possible to choose a starting point and to make appropriate assumptions that will suppress the chaos. That will make it

> possible to predict the future, not in full detail, of course, but in broad sweeps; not with certainty, but with calculable probabilities. (10)

Daneel, however, is convinced that Seldon can develop his paper into a working theory, and he manipulates Seldon into continuing his work on the project. Eventually, Seldon does go on to develop psychohistory as a working science, allowing him to predict the future in a broad sense. After his death, psychohistorians carry on his plan and it becomes known as the Seldon Plan. This plan is in Seldon's words, "enough to remove twenty-nine thousand years of misery from human history" (37). Seldon's purpose is to bring about the greatest amount of happiness for humanity generally as he finds himself obligated to eliminate human misery whenever he can do so.

This has great similarity with the beliefs of contemporary utilitarian Peter Singer, who argues in *Famine* that:

> ...if it is in our power to prevent something bad from happening, without thereby sacrificing anything of comparable moral importance, we ought, morally, to do it" (249)

Since psychohistory allows humans to predict future consequences, it enables them to reliably choose the best course of action. By reducing the future to mathematical equations, a psychohistorian can calculate future consequences with reasonable certainty and with relative speed. Also, through psychohistory, the need to apply specific happiness values to

specific actions is eliminated as it focuses only on mass of human beings and not the individual. The psychohistorians look at the Galaxy as a whole in order to evaluate whether one state of being is better than some other state. In *Foundation, Foundation and Empire*, and *Second Foundation*, Asimov uses religion, trade, economic leverage, military might, and even deception, all with the objective of eliminating or avoiding wars, and bringing peace and economic prosperity to the Galaxy, conditions that allow individual human beings the luxury in which to flourish.

Psychohistory, though it brings stability and solutions to major utilitarian problems, suffers from the flaw that it has to be paternalistic. For psychohistory to work, the larger masses of people have to remain unaware of it and the control of their future lies in the hands of a few psychohistorians. Asimov himself acknowledges psychohistory's paternalistic tendencies in *Foundation's Edge*:

> The Second Galactic Empire--worked out after the fashion of [the psychohistorians]--will be a paternalistic Empire, established by calculation, maintained by calculation, and in perpetual living death by calculation. (423)

As an alternative to the psychohistory, Asimov proposes what he calls "Galaxia." Asimov describes Galaxia in *Foundation's Edge* by likening it to the cells in a human body:

> [Bliss] It [Galaxia] runs itself. Those trees grow in rank and file of their own accord. They multiply only to the extent that is needed to replace those that for any reason die. Human beings harvest the apples that are needed; other animals, including insects, eat their share--and only their share. (368-69)
>
> Yes, it does.... In your own body, don't all the different cells know what to do? When to grow and when to stop growing? When to form certain substances and when not to--and when they form them, just how much to form, neither more nor less? Each cell is, to a certain extent, an independent chemical factory, but all draw from a common fund of raw materials brought to it by a common transportation system, all deliver wastes into common channels, and all contribute to an overall group consciousness. (369)

The establishment of Galaxia serves another utilitarian function, for Galaxia is, in some ways, an ideal solution to the utilitarian calculation problems that Daneel has faced since first formulating the Zeroth Law. Daneel's chief problem is still his inability to pick out what is meant by "humanity." Psychohistory is one potential solution to Daneel's problem, but it has the weakness of being strongly paternalistic. Galaxia, on the other hand, allows Daneel to avoid considering humanity as an abstraction by simply creating a concrete entity to serve as a placeholder for humanity. Daneel explains:

> I engineered the founding of [Galaxia]. If humanity could be made a single organism, it would be a concrete object, and it could be dealt with. (481)

Daneel can now calculate the greatest good for humanity simply by asking what the greatest good is for Galaxia. Thus, he now has a specific entity whose well-being he can calculate. Galaxia provides a motivation for acting in a good utilitarian fashion, for according to Daneel in *Foundation and Earth*, Galaxia was impossible "unless human beings valued the superorganism more than their individuality." (481) Galaxia requires the individuals to put aside their own interest in favour of the interest of the group as a whole. The overall good, in other words, outweighs the good of the individual. David Brin, the author of the *Second Foundation Trilogy*, has argued that the Galaxia solution "seems to permanently end the adventure of human individuality."(19). He suggests that Asimov would have eventually rejected Galaxia had he lived to continue the series. Brinn is more sympathetic to the Kantian view that stresses on the commitment to individual autonomy, and he believes that Asimov would have gradually moved the series in this direction. However, Miller does not agree as he believes that Asimov has been very consistent in all his novels and states that

> While certainly it is not inconceivable that Brin is correct, any such shift away from utilitarianism would at the very least represent a major paradigm shift for Asimov. (202)

Asimov died on 6 April 1992. On his death, the media poured out a flood of praise on his life and achievements. He was called a "twentieth century Renaissance man" and the "Great Explainer." Dictionary.com defines Renaissance man as "a present day man who has acquired profound knowledge or proficiency in more than one field" (n.pag.). Asimov is truly deserving of this appellation. His books range over nearly every field of science, literature, history, ethics, humanity, social commentary, mathematics, and more. While he is remembered best for his prodigious works of science fiction-- a genre for which he set the standards, dividing the good from the bad, the gold from the dross -- his 466 books qualify him to be called a "one-man Renaissance."

Besides his literary achievements, Asimov is also remembered for his social activism. His immense love for humanity, like many of the characters in his books, compelled him to act and speak out or protest against issues that he felt were harmful to the well-being of mankind. He openly professed his objections to established religions, notions of nationalism and pseudo-scientific beliefs. When he took up the presidency of the American

Humanist Association in 1985, Asimov began work as narrator of the AHKS promotional film, Humanism: Maung Bigger Circles, which remains available today in both film and video format. Also in 1985, Asimov joined with the National Emergency Civil Liberties Committee (headed by Corliss Lamont, the AHA president emeritus) in a lawsuit against the federal government over a rider which had been appended to the funding bill for "magnet schools." The rider prohibited the use of any federal funds under terms of the bill which might be used to promote "secular humanism." Leading education groups joined in voicing opposition, but the issue was rendered moot when, in the next session, the offending rider quietly disappeared.

Asimov had his own personal views on many important topics and with great wisdom and insight, he expressed these views in his own style using wit and humour. A good example of this has been quoted in a tribute article by the president emeritus of the American Humanist Association, Bette Chambers. In "Isaac Asimov: A One-man Renaissance", she quotes:

> On censorship and its handmaiden, creationism:
>
> All historical precedents show that the ability to censor and to enforce orthodoxy is a delight that knows no limits. Today "equal time," tomorrow

the world. Today it is your views on science, tomorrow the way you dress and speak and behave.

On pseudoscience and claims of the paranormal:

When a view denounced by scientists as false is, nevertheless, popular with the general public, the mere fact of that popularity is strong evidence for its worthlessness.

On orthodoxy among scientists:

I hope scientific orthodoxies never remain unchallenged. Science is in far greater danger from an absence of challenge than from the coming of any number of even absurd challenges. Science, unchallenged, can become arthritic and senile, whereas the most absurd challenge may help to stir the blood and tone the muscles of the body of science.

On women's rights as a cure for overpopulation:

A high-birth-rate world means women's subservience. Without women's subservience we can't have a high-birth-rate world. Well, then, what about a low-birth-rate world? In such a world, will women be set free? Yes, they will. It is not even a matter of choice. They must be set free. Consider - . . .A low-birth-rate world requires women's equality. Without a women's equality world, we can't have a low-birth-rate world. And since it is quite clear that a low-birth-rate world is the price of the survival of our

> civilization, it follows that the acceptance of the ideals of women's equality is also the price of survival.... If we try for a low-birth-rate first and feminine equality second, we will get neither; while if we try for feminine equality first and get it, we will automatically get a low-birth-rate as well... Since we don't have much time, the price of survival is feminine *equality as quickly as possible – even now* (n.pag.)

Also in this article, Chambers quotes Arthur C. Clarkes' tribute to Asimov:

> He stood for knowledge against superstition, tolerance against bigotry, kindness against cruelty - above all, peace against war. His was one of the most effective voices against the "New Age" nitwits and fundamentalist fanatics who may now be a greater menace than the paper bear of communism ever was. (ibid)

As in his life, so also in his works, Asimov reveals his humanistic side time and time again as his central characters work tirelessly for the benefit of human society:

> Asimov claimed to be a materialist, a believer in the tenet that everything could be reduced to matter and energy, but matter and energy alone do not account for his boundless appreciation of life... He disliked emphasis on difference; thus he was not in favor of people identifying with culture, ethnicity, or nation. Rather, the ties that bind were more important than those that divide (J. Asimov 179).

In the *Foundation* series and *Robot* series, the stories never focussed on individuals. The main concern or themes of these stories revolve around humankind as a whole. Asimov is more interested in what humanity can achieve together as a whole and did not pay much attention to petty differences within it. In both life and works, he endeavours to stand above such differences and attempts to lead people away from them. This is why he attacks many established notions and beliefs as he feels that they are tools used for prejudices and divisions. Asimov argues that these things are old and obsolete ideals and for the sake of humanity, people have to move away from them and change. He believes strongly in the power of literature, especially science fiction, as a tool to create awareness and bring about change and considers it to be a mirror for society to examine itself. In *I, Asimov: A Memoir*, he expresses the joy derived from reading:

> But life is glorious when it is happy; days are carefree when they are happy; the interplay of thought and imagination is far and superior to that of muscle and sinew. Let me tell you, if you don't know it from your own experience, that reading a good book, losing yourself in the interest of words and thoughts, is for some people (me, for instance) an incredible intensity of happiness (n.pag.)

In *Asimov on Science Fiction*, he emphasises the need for change and the importance of science fiction in foreseeing the direction of this change:

> It is change, continuing change, inevitable change, that is the dominant factor in society today. No sensible decision can be made any longer without taking into account not only the world as it is, but the world as it will be...This, in turn, means that our statesmen, our businessmen, our everyman must take on a science fictional way of thinking (n.pag.).

Errol Vieth, in his review of *It's Been a Good Life,* states that Asimov is more than a scientist and his deep appreciation of life and respect for humankind always inform and influence his writings:

> He was, then, the archetypal scientist. His understanding of the world and its workings was immense and deep, and it caused him to respond with awe, joy, and gratitude to his existence and to the physical and human worlds that he tried to understand and to explain, with much success, to others. This understanding informed his respect for and appreciation of human life, evinced in his commentaries about human cultural artifacts-namely, his writings on history, the Bible, literature, and comedy (184).

Asimov is an author with a conscience and a great concern for the society he lives in, and his life and fiction is a reflection of that conscience. The concepts that he has been credited with, such as the three laws of robotics and psychohistory, show how by using the science fiction genre, he can expose the inherent problems that beset mankind, and find possible solutions to them. Though both concepts are fictional, researchers and scientists are now studying, with positive results, the possible usage of these

concepts, thus validating the deep insight and views that Asimov holds about the present day world. His humanism influences his worldview and in turn, influences how he creates his art. His characters, much like himself, tirelessly strive towards achieving the greatest good for humanity. The association of his works to social concepts such as historical Marxism and utilitarianism further establish him as a social critic. Though he himself does not claim to have any association with such ideologies, critics and advocates of both ideologies have studied the comparative similarities between the concepts and themes of his fiction with the principles that govern these ideologies. Asimov bravely speaks out against rigid traditions, both religious and nationalistic, basing his objections to traditions are valid arguments that stem from his great concern for the welfare of humanity. The compassion for his fellow man, with which he expresses his critique of contemporary society, always comes through in his fiction and finds great support from his readers. He is an acknowledged Renaissance man since his scope of interest and influence range over a very wide field. Though not the greatest writer in purely literary terms, Asimov has proven that he is an influential figure in the sphere of social criticism as seen from his "social science fiction"-- a term he invented to describe the majority of his works.

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Commencement of 2nd Semester/ Dissertation	:	**20th April 2010**

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1. BPGS	:	**8 April 2010**
2. School Board	:	**20 April 2010**
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Date of Submission	:	
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