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 18\textsuperscript{th} 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 19\textsuperscript{th} 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 presupposes 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.

Because of Hari Seldon's dead hand?

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 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..." (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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