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THE NATURE OF CHARACTERISATION IN POST-WAR AMERICAN SCIENCE FICTION:

A STUDY OF SELECTED NOVELS BY ASIMOV, HEINLEIN, AND DICK

Thesis submitted in fulfilment of the requirements for the

'Doctorat es-sciences' degree in American Literature

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DEDICATION

I dedicate this work

To my beloved mother and my dear father for their love, devotion, and unlimited sacrifice

To my sisters and brothers for their support and encouragement

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ABSTRACT

The thesis deals with the element of characterisation in post-war American science fiction in light of the great changes in the modern world and in the fictional worlds of the future which have the direct effect on the treatment of characters in the genre. The development and treatment of characters in science fiction has often been regarded as a weakness and science fiction writers have usually been condemned for their neglect of creating complex and rounded characters with psychological depth and intricacies of personality and for paying more attention to the science-fictional elements such as plot, setting, and themes. By adopting a Marxist approach in the study of novels by the leading American science fiction writers of the post-war era, the dissertation attempts to demonstrate that the character-centred novel which has dominated realist mainstream fiction since the nineteenth century does no longer fit the genre science fiction which is more concerned with the different changes and transformations in society and their effects on man and his existence on Earth and in the universe than with individual persons and their personal concerns and problems. After a first part devoted to the history of science fiction in general and of American science fiction in particular, the thesis moves to the study of selected novels by Isaac Asimov, Robert Heinlein, and Philip K. Dick, which demonstrates that characters are treated not as individuals with personal autonomous identities, but as representatives of all humanity that faces various pressures in society in the form of technological progress, bureaucratic government agencies, multinational corporations, and the military machinery. In this respect, the work examines the different factors depicted in the narratives which constitute the major focus of the writers and which make the characters appear as a collective entity lacking the traits of independent individual personalities, reflecting the real condition and existence of man in the modern world.

TABLE OF CONTENTS

INTRODUCTION

Science fiction is the distinctive literature of our age of science and technology. It represents one of man's most imaginative efforts to accommodate himself to a rapidly changing world and to share insights about an age in which space travel, computers, electronics technology, genetic engineering, and nuclear doom have become the basic features that challenge human existence on Earth. Today science fiction is widely recognised as the only branch of literature which even attempts to speculate about the destiny of the human race in light of the complex and dizzying scientific progress and rapid technological developments, along with the great changes in all aspects of human life. Relying on speculation and extrapolation, science fiction suggests different futures for humanity that one might not have considered previously and provides imaginative interpretations of life conditions in the contemporary world that may guide the future of human civilisation. Although science fiction is sometimes quite radical in its visions, it has successfully become one of the most popular cultural movements in the second half of the twentieth century and early twenty-first century. People often tend to believe that we live in a science fiction environment where we see the oldest dreams of science fiction being actually realised and being made into believable visual images on the screens, and where we see various technologies proliferating, human dependence on machines increasing more and more, and world-changing events, such as world wars and revolutions, social and cultural movements, industrial and natural catastrophes, having their great influence on human life. Science fiction's use of a variety of topics and motifs, such as post-apocalyptic worlds, encounters with aliens, robots, time travel, colonisation of other planets, alternate histories, space wars, and psychic

powers, have made the science fiction mode more diverse in its forms than any other genre of literature and have led to the extension of its forms of expression to include movies, TV series, computer games, media advertising and music, in addition to the phenomenal increase in the science fiction book sales.

Although several categories of literature that were considered the origins of science fiction, such as the gothic stories and fantasy, were written in earlier centuries and began outside the United States, science fiction as an independent and respectable literary genre is a phenomenon of the twentieth century and mainly an American activity that was born, named, and flourished on the American land. American science fiction dominated and still dominates the discourse and public consciousness worldwide helped by the rapid technological evolution and the rise of the United States to a super-power status in the scientific, economic, and military fields. During the first two decades since its emergence in the American pulp magazines in 1926, science fiction was intensely scorned and contemptuously ignored by the mainstream literary critics and academics who were the powerful arbiters of literary fashion. In spite of the wide popularity science fiction had achieved among the growing numbers of its readers, the conventional literary authorities despised science fiction because of the low quality of writing of its unskilled and inexperienced young writers and the lack of a realistic view of the actual problems and experiences of the world. After decades of struggle characterised by both failures and successes, science fiction has finally been accepted and recognised as a respectable literary genre with its own conventions and traditions, and with the critical and academic heritage it has established throughout almost a century of practice. Science fiction is now a genre that has achieved stylistic and technical sophistication and intellectual maturity, and also a genre that helps

people understand their rapidly changing contemporary world and come to grips with the crises facing humanity in the technological age.

However, it seems that science fiction is still open to criticism as it is often condemned for its lack of convincing characters and its concentration on setting and story problem at the expense of developing strong and rounded actors with description and psychological depth. Critics often regard the treatment of characters in most science fiction as a weakness and sometimes as neglect on the part of science fiction practitioners who are drawn more to the description of new landscapes (on Earth or on other planets) and the big changes in society brought in by the development of technology, leading them to rely on stock figures and caricatures that lack the essential traits of individual personality inherent in realistic fiction. For instance, mainstream critic Robert Scholes in his work *Structural Fabulation* (1975) and science fiction critic Kingsley Amis in *New Maps of Hell* (1975) consider that the complexity of ideas and the development of themes in science fiction replace character and the intricacies of personality, while Carl Malmgren in *Worlds Apart* (1991) and Karl Kroeber in *Romantic Fantasy and Science Fiction* (1988) concentrate on the cognitive function of the genre which stems from the scientific outlook of the world and which leads to an impersonal dealing with characterisation. Other critics have identified other aspects in the science fiction narratives that attract the attention of writers and lead them to relegate the development of characterisation to a subordinate position. For example, Mark Rose in *Alien Encounters* (1981) and Gwyneth Jones in her essay "The Icons of Science Fiction" (2003), affirm that science fiction writers tend to foreground the landscape and setting with a special focus on gadgets and technological devices, and to rely on caricatures and stock characters. In fact, wherever the aspect of characterisation in science fiction is

discussed, it is mentioned as a weakness and a deficient point in the genre, often making reference to the conventional realistic novel which has mostly been character-driven and where the intricacies of personality and the traits that define a personal identity are central to the course of the narrative. Actually, there are two basically opposing doctrines about character in the modern realistic novel. One holds that characterisation and its full development with physical description, thought, feeling, action (behaviour), effect on others and reaction to other characters, is the primary purpose of the novel, because it is the convincing realistic character, with whom the reader can identify, that creates the plot and moves the story along. The second doctrine, however, considers character creation and development as subordinate to the plot, emphasising context more than persons, and it is with the second orientation that science fiction can be identified. Nevertheless, the character-centred novel remains the dominant fashion in fiction writing since the emergence of the novel in the 18th century.

In the modernist novel of the first half of the twentieth century, with the growing complexities in the modern society, writers such as James Joyce, Virginia Wolfe, J. D. Salinger, and D. H. Lawrence opted for the romance of psychology, exploring the character's psyche and going deep into the individual's mind, detaching characters completely from social concerns and the growing pressures in the modern world. At that time, and especially after the Second World War, science fiction was gaining ground in the United States as the most popular literary mode of expression that grapples with the metamorphosis taking place in contemporary world and the collective social pressures that have grown more coercive as a result of the dominance of technology, multinational corporations, bureaucracy, and the rise of political tyrannies. Instead of retreating and delving deeper into the self, science

fiction transposes into the future worlds it creates the images of the real repressive powers in contemporary society where there is an interplay of human beings and society, but society is central. In science fiction the character is the one who thinks and acts by the standards of the time and the place, which implies that the nature of the background and the context in science fiction stories are more emphasised than character development.

Therefore, the central question of the treatment of characters in science fiction becomes so crucial and it is important to examine the way characterisation is dealt with in American science fiction of the post-war era at a time when the genre has become an American trademark and a respectable and highly sophisticated branch of literature. The post-war American landscape with its rapidly changing technological, social, economic, and political aspects offered science fiction the appropriate laboratory for science fictional experiments to extrapolate on the destiny of humanity in this dangerous and complex world. If we assume that much of serious science fiction, even in its most radical visions, is realistic to a certain extent, reflecting on contemporary society and the effects of the social metamorphoses on people, then it is essential to ask to what extent the presentation of characters in the genre has undergone a similar metamorphosis, and is thereby equally realistic depicting the real place of man within his environment. Given the nature of science fiction as a genre concerned with the process of change in society and in the conditions of human life, change has also taken form in the narratives which offer an infinite number of possibilities with unfamiliar contexts and settings and genius problems so that characterisation is made subordinate to the background and plot. So the present work is an attempt to examine the question of whether the element of characterisation in science fiction is a weakness and a failing aspect by the conventional novelistic

standards as many critics claim, or whether the genre has come as a revolution in establishing the proper doctrine in the treatment of characterisation in the art of fiction in light of the rule of constant change that governs human society and the universe, and that science fiction adopts in its narratives.

The thesis deals with the issue through the study of novels by three of the leading and most prominent writers of the post-war period who represent American science fiction at one of its highest and most accomplished stages of development. And since the background (setting) and plot (story problem and resolution) are the essentials in a science fiction story, the study adopts a socio-historical approach to determine the various factors and powers in the fictional worlds of science fiction that have led to the depiction of characters in a way that many critics have condemned. This objective can be achieved through the Marxist critical approach that has played a crucial and important role in science fiction criticism, especially in the second half of the twentieth century. Although Marxism as a political thought and ideology has lost much of its strength after the collapse of the Eastern bloc and its regimes, many of its key concepts have been adopted by other critical social and cultural movements and literary theorists in the form of new Marxist theories of criticism with the ascendency of capitalism, the dominance of technology, and the marginalisation of humanity. Marxism survived because its core principles that still fascinate intellectuals and cultural theorists declare that social and economic conditions shape human life and consciousness and determine the status and value of humans in society. Given the nature of modern science fiction as a means of a sophisticated critique of the capitalist exploitative order and of the highly mechanised society, science fiction has deep affinities with Marxist thought which has been developed by such critics as Carl Freedman, Darko Suvin, and Frederic

Jameson, who have become the leading Marxist theorists in the field of science fiction, and whose work appeared mainly in Science Fiction Studies, a magazine founded by Darko Suvin and R. D. Mullen in 1973, in which neo-Marxist criticism of science fiction originated. Carl Freedman considers that science fiction is a particularly potent form of political commentary and social criticism, while Frederic Jameson, the most influential Marxist theorist whose interest in science fiction made his work, mainly his essay "Progress versus Utopia" (1982) and his book *Postmodernism, the Cultural Logic of Late Capitalism* (1991), so valuable in the analysis of form, character, and setting through which science fiction works have discussed the fundamental problems of "late capitalism."

Within this framework and through the study of novels by Isaac Asimov, Robert Heinlein, and Philip K. Dick, the thesis examines the set of conditions –political, socio-economic, and cultural- depicted in the novels about future worlds and their effect on the presentation of characters in the narratives –their thoughts, feelings, behaviour, and value. The thesis is divided into the following chapters:

Chapter one begins with the different definitions given to science fiction, which is viewed as a complex and multidisciplinary genre with regard to its various constituent elements, and then it examines its themes and the elements that constitute its background, such as space and time travel, aliens and alien encounter, interstellar wars, alternate histories and worlds, robots and artificial intelligence, and psionic powers. The chapter also gives a brief overview of the history of science fiction and its origins in stories written centuries earlier before the emergence of the modern genre in the 20^{th} century.

Chapter two is devoted to the history of American science fiction which had its roots in the nineteenth century with influences from the European continent, and then it developed very rapidly, culminating in the emergence of the modern genre. The chapter concentrates on American dominance in the field in the post-war era and explains the factors that have led to the supremacy of the United States, not only in science fiction literature, but also in science fiction industry –films, computer games, and art designs.

Chapter three introduces the first writer, Isaac Asimov, who is widely regarded as the master of American science fiction and whose widely acclaimed robot novels *The Caves of Steel* and *The Naked Sun* portray future worlds in which technology invades and shapes every aspect of human life. The study of characters in Asimov's robot novels is done through the analysis of the conditions of life in a technologically shaped society that determine human existence and character.

In chapter four, Robert A. Heinlein shifts his interest from the setting of Asimov to the socio-political and cultural aspects in his fictional worlds of *Starship Troopers* and *Stranger in a Strange Land*. In Heinlein's most controversial novels, his themes and ideas about contemporary America in the social, cultural, and military fields fill the background and define the place and nature of characters within the social framework and historical context he has projected in his novels.

Chapter five deals with the work of Philip K. Dick whose exploration of themes related to the breakdown of reality and the nature of humanity in his sophisticated and complex novels has brought in unique types of characters in the science fiction tradition of the sixties. In *Do Androids Dream of Electric Sheep?* and *Ubik*, Dick's setting shifts from the outer space –environment- to the inner space –psyche- of his

characters where the oppressive reality of human existence in the technological age is reflected.

Finally, the conclusion gives a general summary of the result of the study which comes from the interplay of the various powers in society that eliminate the individual person and suppresses personal freedom and identity so that humans become anonymous figures manipulated by forces they are unable to control.

CHAPTER ONE

Science Fiction: Definitions, Themes, and Origins

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Introduction

There is no branch in literature as dynamic and diversified as science fiction. It is the field which is subject to constant change and progress with regard to the great changes in the modern society, the rapid technological developments and the revolutionary scientific inventions in the modern world and their impact on humanity. For many critics and academics, science fiction is problematic in the sense that the genre that depicts worlds which are different from our own, as for instance in stories set in the future or on other planets, and that uses a wide range of topics, motifs and elements, raises the question of how science fiction is to be defined, and how it has come to exist. This chapter provides various definitions given to science fiction; it surveys its diverse themes and image-systems (elements); and traces its origins in earlier writings before it has become an independent genre of literature.

1.1. Definitions

Any discussion of science fiction or its themes begins with definitions, but the disparate nature of its constituent elements is one of the reasons that the genre has proven so difficult to define and so hard to distinguish from other categories of fiction such as fantasy. Since the writing of science fiction has entailed some change and modification of the established conventions of fiction writing, there have been many attempts at establishing a practical and convenient definition that might be consistent and concordant with its nature. Most definitions involve the aspect of science and technology which is associated directly with the genre although it may sometimes appear as pseudo-science or pseudo-technology. For many years since the

genre has been labelled science fiction, writers and critics have argued about a working definition that might embody its specific characteristics and its particularity. Brian Aldiss, the well-known British science fiction writer and critic, suggests that "science fiction is a search for the definition of man and his status in the universe which will stand in our advanced but confused state of knowledge" (Aldiss 1973: 8). Aldiss's definition may belong to the philosophical interpretation of science fiction and needs to highlight the essential elements that constitute the genre. In spite of the implicit reference made in Aldiss's definition to science, the relationship that exists between science and fiction is not properly defined. In this sense, a handful of definitions have precisely highlighted this keen relation between science and fiction in this new literary art form. Hugo Gernsback who first named the genre offered the following definition: "By 'scientifiction' I mean the Jules Verne, H. G. Wells, and Edgar Allen Poe type of story –a charming romance intermingled with scientific fact and prophetic vision" (Quoted by Westfahl 1998: 70). Similarly, Robert Heinlein suggests that science fiction is "realistic speculation about possible future events, based solidly on adequate knowledge of the real world, past and present, and on a thorough understanding of the nature and significance of the scientific method" (Quoted by Parrinder 1980: 16). Therefore, scientific and technological elements and scientific method constitute the guiding force in the plot of science fiction stories with the vision of futuristic developments. On the other hand and more important for James Gunn is the focus of science fiction on the conditions of life of the human race; he argues that,

> *Science fiction is the branch of literature that deals with the effects of change on people in the real world as it can be projected into the past, the future, or to distant places. It often concerns itself with scientific or technological change and it usually involves matters whose importance is greater than the individual or the community; often the civilization or the race itself is in danger (Gunn 1982: 16).*

Nevertheless, science is not the whole bulk of science fiction writing; indeed, we are faced with a heterogeneous genre that combines multiple elements from the real to the purely unreal and imaginative. For this reason, it is always very difficult to define science fiction with one simple, straightforward definition that clarifies its nature and its relation to other genres since science fiction overlaps with other branches of literature, especially with fantasy. Indeed, the latter constitutes the first among many origins of what is labelled in the twentieth century pure science fiction. Among the many definitions that emphasise the element of fantasy in science fiction is the one suggested by David Pringle who states, "Science fiction is a form of fantastic fiction which exploits the imaginative perspectives of modern science" (Pringle 1984: 9). This means that science fiction is not pure fantasy but rather a logical and scientific explanation of the fantastic. In fact, fantasy is the fiction of the unreal and the supernatural which could not happen and which does not offer a logical explanation of its happening as in the works where magical belief and myth dominate and where dragons, monsters, demons and supernatural creatures exist without rational or scientific treatment. Nevertheless, much of science fiction body has drawn on the literary tradition of fantasy by shifting from a supernatural and unreal explanation of phenomena to a logical scientific mode in terms of conventionally formulated natural law or hypothesised laws of the universe. In evolutionary stories or in stories about alien creatures, there is always an element of the fantastic, and therefore it is the realism of science fiction which is put into question. Mark Rose insists that "Science fiction- or rather, the idea of science fiction as a genre- does not exist except insofar as it differentiates itself from fantasy" (Rose 1981: 18). However, Mark Rose cannot deny that fantastic elements constitute an inherent part in the science fiction tradition and he argues,

> *On one hand, by portraying a world that is always in some respect fantastic, science fiction differentiates itself from realism; on the other, by invoking the scientific ethos to assert the possibility of the fictional worlds it describes, science fiction differentiates itself from fantasy … Science fiction presents its worlds as possible even when they plainly are not (Rose 1981: 20).*

In this respect, Kathryn Cramer considers science fiction to be a genre that explores the question "what if?" She claims:

> *Writing stories within the rules of the universe as we know it and yet discovering fantastic possibilities of new ways of life is the central endeavor of the science fiction writer. Physical law tells us that many things are impossible given existing technology, but the ever-expanding frontier of scientific knowledge shows us how to do many things of which we would never have dreamed (Cramer 1994: 81).*

Although there raised many voices in the literary world rejecting what they called "hybrid fictions" and claiming that the realms of science and literature ought to be kept separate, many other voices praised this multi-genre fiction with its unique concern about humanity and the universe and its extraordinary mélange of the supernatural, gothic, and scientific. In the introduction to his book *The Ghost of Guy Thyrle* (1895), Edgar Fawcett observes:

> *To make our romances acceptable with the world of modern readers, we must clothe them in rationalistic raiment … They may be as wonderful as you will, but they must not touch on the mere flimsiness of miracle. They can be excessively improbable, but their improbability must be based upon scientific fact, and not upon the fantastic, emotional and purely imaginative ground-work (Quoted by Parrinder 1979: 69).*

In fact, the chief forte of this particular brand of literature lies in its ability to transport readers to a higher vision of the natural universe and to create a sense of wonder which is always rationally justified by scientific logic. Following these various attempts at establishing a general working definition of science fiction, it appears that the genre is a quite complicated art form that is not always purely scientific or purely fantastic, it is rather a speculative fiction concerned with the

future of humanity and its place in the universe and draws on different genres that constitute its roots, such as myth and fantasy, and relies on scientific and technological knowledge of a constantly changing world.

1.2. Sub-Genres and Themes

1.2.1. Science Fiction Sub-Genres

The complexity of science fiction does not only lie in its definition but also in its various categories or sub-genres that have come to exist along with the extraordinary progress in scientific and technological research and knowledge. In the literary experience, we generally tend to consider a work of fiction as authentic when it reflects the real world around us with observation. Nevertheless, there is in fact certain reality that surpasses appearances and can be tested only through science or scientific and technical knowledge that both writers and readers must acquire. This is the case of hard science fiction which is defined by Allen Steele in "Hard Again" in New York Review of Science Fiction, June 1992: "Hard science fiction is the form of imaginative literature that uses either established or carefully extrapolated science as its backbone" (Quoted by Clute and Nicholls 1999: 542). Accordingly, the themes treated in this category include subjects related to astronomy, computer science, robotics, cybernetics, gravity, mathematics, space flight and spaceships, weapons and rockets and power sources such as nuclear power, and sometimes biology and genetic engineering which are associated with hard science fiction as appropriate material. Besides, what is important and required in hard science fiction is not to rely on real science and scientific accuracy but rather to depict a world that science and technology might make accessible; in other words, it should respect the scientific spirit and principles that provide natural rather than supernatural explanation of the phenomena. Taking this principle into account, some hard science fiction writers

have tried to provide a rational treatment of certain phenomena and characters such as vampires, supermen, time travel, and ESP –extra-sensory perception- which have become part of hard science fiction themes by respecting the scientific spirit in their treatment. The most prominent figures of hard science fiction include H. G. Wells, Robert Heinlein, Arthur C. Clarke, Isaac Asimov, and Poul Anderson.

By analogy with hard science fiction, soft science fiction is included in the genre terminology to apply to works that deal with themes related to soft sciences. By the latter we mean the social sciences which are concerned with human affairs and societies and which focus on human feelings that require neither technological hardware nor scientific and physical laws for their carrying out. Most soft science fiction writers take common themes or elements in hard science fiction like space travel and alien encounter but focus on the various social and psychological changes evoked by these themes. Soft sciences comprise such sciences as economics, sociology, anthropology, linguistics, psychology, and politics. Generally hard scientists have been known to despise these fields for their lack of rigorous scientific accuracy and the difficulty they face in applying scientific principles and predicting recognisable results. Soft science fiction is also used as a synonym for New Wave science fiction which started in the 1960's as a reaction against existing hard science fiction and which was characterised by a high degree of experimentation. Indeed, New Wavers tried to bring science fiction into mainstream literature with a concern with the issues related to society rather than a focus on outer space. Much of the New Wave science fiction writing had a strong involvement in the late 1960's counterculture including an interest in religion, sex, the media, and a focus on the likelihood of disaster caused by social, ecological and political factors. New Wave science fiction is generally assimilated with soft science fiction as the battle launched

in the 1960's by the New Wave writers was over and the movement is no more new. Among the most prominent writers of this category are Ray Bradbury, Ursula Le Guin, and Brian Aldiss.

In addition to these categories, space opera occupies a quite particular place in science fiction genre. First suggested by Wilson Tucker in 1941, it is a subgenre that has the focus on action-adventure interstellar travel and space battles and wars. Its main storyline is interplanetary conflict in which the writers portray characters using mystical powers and destroying whole planets and alien species. These large-scale space battles take place with sophisticated futuristic weapons such as ray-guns and include such elements as the faster-than-light travel and time travel which are considered a violation of the known laws of physics. In spite of such violations, there is actually no sharp dividing line between space opera and hard science fiction that concentrates on the effects of technological progress and inventions since the writers combine both space adventure and scientific elements present in hard science fiction. Space opera witnessed also certain progress through its existence; it has become darker and more sophisticated as it shifted in the 1960's and 1970's from the triumph of mankind to the threat of the extinction of human race, and it involved newer technologies of warfare and more military themes. According to science fiction critics, the stories of space opera are interpreted as a speculation about future war in space and its effects on humans. Among the outstanding practitioners of this genre are Stephen Baxter, David Weber, and the prominent figure Isaac Asimov, especially in his *Foundation Series.* Variants of space opera are diffused as TV science fiction series such as *Battlestar Galactica* (1978), and *Star Trek* which refers to six science fiction television series and ten motion pictures with hundreds of video games all

created in the 1960's. The most famous space opera movies ever produced are the *Star Wars* films (1977-2005) by George Lucas.

Science fiction does not only manifest action-adventure and futuristic wars, it has also a concern with a better and ideal world for humans to live in. From this idea comes utopian science fiction which is derived from an old concept linked to the religious ideas of Heaven and the Promised Land. In literature, utopia has come to mean an ideal world to be achieved by the efforts of human beings and the term utopia was first coined by Thomas More in his work *Utopia* (1516) in which he sets out a vision of an ideal society. Moreover, utopia was derived from the Greek "outopia" (no place) rather than "eutopia" (good place), but the modern usage implies the second meaning. An earlier example of a utopian work from classical times is Plato's *The Republic* which highlights the ideal society and its socio-political system. In science fiction, utopia is an important aspect that allows the writers to practice hypothetical sociology and political science with the notion of scientific advancement. Speculations are generally about achieving a better and perfect world based on scientific and technological progress. Another important development in the modern utopian science fiction is the shift from dealing with a better place to dealing with a better time under the influence of historical and social change and progress. This has led to a speculative vision about real future possibilities because of the awareness of the advancement of scientific knowledge and of the role that science might have in the transformation of society. The writer who most celebrated the utopian world in his scientific romance and who became the greatest prophet of this idea is H. G. Wells in works such as *A Modern Utopia* (1905), *Men Like Gods* (1923), and *The Shape of Things to Come* (1933). However, this vision has turned into a nightmare with a bleak and dark future giving rise to dystopia which is the

offshoot of utopia and which denotes a world that contains images worse than the existing one: a world of nightmare. Along with a hope for a better future, the fear of disappointment has grown as science has invaded every aspect of human life and social and political programs have failed to meet the most urgent aspirations of humanity. Many science fiction writers have warned that decadence and decline might be the consequence of overdependence on machines and they have developed a vision of a futuristic state under threat from rebellion, war, and horrors. In recent years, a more pessimistic outlook has gained ground and has given more force to dystopian science fiction in which the actual world's problems have been aggravated by overpopulation, the prospects of pollution and the destruction of the environment. Among the notable science fiction writers who adopted the dystopian trend are Ray Bradbury in *Fahrenheit 451*, Asimov in *The Caves of Steel* (1954), Kurt Vonnegut in *Harrison Bergeron*, and Robert Heinlein in *Sixth Column* (1949).

1.2.2. Themes in Science Fiction

To say science fiction is a literature of rational, scientifically based extrapolation is not so often true. If we analyse the themes treated from the early times when writers produced what has come to be called "science fiction," we realise that these themes are quite varied and that they belong to different other genres such as fantasy, utopia and the gothic. Many of the themes that have come to be accepted in science fiction today belong to speculative fiction that used elements that existed before the age of modern science, but that constitute the roots of the genre as we know it today. For this sake, it is convenient to divide the themes of science fiction into two categories; the first being the pseudo-science fiction themes while the second belong to modern science fiction. Nevertheless, many of the earlier themes in pseudo-

science fiction have come to be accepted in modern science fiction with more scientific interpretation of the phenomena involved in the stories.

1.2.2.1. Old Traditions: The Fantastic Voyage, the Gothic, and Alien Encounter

As for the first category of themes the fantastic voyage is the most important in the ancestry of science fiction and one of the oldest subjects which often involves a marvellous imaginative journey into an incredible and unknown realm. These voyages took their heroes to worlds underground and beneath the sea, to the moon or to other planets. Among the earliest fantastic voyages that can be claimed as ancestors of science fiction are Homer's *Odyssey* from the first millennium BC, Cyrano de Bergerac's *Other Worlds* (1657), John Kepler's *Somnium* (1634), Francis Godwin's *The Man in the Moon* (1638), Jonathan Swift's *Gulliver's Travel* (1726), and Jules Verne's *Journey to the Centre of the Earth* (1863) and *Twenty Thousand Leagues Under the Sea* (1870).

In the modern times and with the technological progress and the invention of spaceships, space travel has become a variant of the fantastic voyage with notable attempts made by such writers as Laurence Manning in *Voyage of the Asteroid* (1932) and Arthur C. Clarke in *Prelude to Space* (1951). A new scope for the fantastic voyage which opened up the limitless vistas of the future was revealed by H. G. Wells in the last years of the 19th century in his revolutionary story *The Time Machine* (1895). A story about a time traveller who demonstrates that time is a fourth space dimension and that a suitable apparatus (machine) can move back and forth in this dimension. He then immediately sets off on a journey into the future. Wells reveals in this story his socialist political views about the contemporary industrial society and his angst about its future. In a parallel way, it can be argued that the

fantastic voyage throughout its existence has not been only a set of episodes whose function was simply to distract. It has actually presented worlds with strange aspects that reflect the real world ironically or subversively. In many cases the fantastic voyage has had allegorical implications as the voyage has tended to achieve self-knowledge and maturity in perceiving the surrounding environment.

As a successor to the fantastic voyage, the subject of lost worlds has captured the interest of people and writers for centuries and has become a modern theme in science fiction with the development of the new sciences of geology, anthropology and archaeology although the fiction was often based on mystery rather than science. The idea of lost worlds refers to lost lands, lost civilisations and lost races that constituted former inhabitants of distant regions on Earth. The theme includes two basic categories related to lost lands and civilisations and the second is concerned with lost races of humans or other creatures. One of the oldest beliefs about life in general advanced the theory that the Earth is hollow and that there are races of people more technologically developed that thrive in subterranean cities, and some even believe that UFOs (Unidentified Flying Objects) are not from other planets but are sent by strange beings in the interior of the Earth. Among the first writers who supported the idea was Jules Verne in his famous *Journey to the Centre of the Earth* (1864) which tells the story of a group of explorers who reach a subterranean world by way of an extinct volcano. Verne was followed in the same vein by William Reed who published in 1906 *The Phantom of the Poles* in which he claimed that the North and South Poles are entrances to the Hollow Earth. Closely related to the Hollow Earth is the legendary city of Agartha which is the name given to the society of underground inhabitants and which has been the subject of a countless number of science fiction stories although the idea has never been supported by modern science.

An early source for the belief in the underground civilisation of Agartha is Willis George Emerson's *The Smoky God* (1908) which explains how the protagonist Jansen sailed through an entrance at the North Pole to the interior of the Earth. He lived with the dwellers of Agartha for two years and discovered their civilisation. In addition to the North and South Poles, several entrances to the kingdom of Agartha have been suggested such as the Himalayan Mountains, Mongolia, Rama in India, the Pyramid of Giza in Egypt and King Solomon's Mines.

Examples of many other lost worlds and civilisations have been a subject of scientific research based on speculative theories in anthropology, geology and archaeology and have thus attracted the attention of a lot of science fiction writers. These examples include the Mayans, the Incas, the Mu or Lemuria Kingdom in the Pacific, the Polynesians, Australia's Underground World and many others which have constituted for a century the source for many Lost Worlds stories written by Charles Vivian, Vaughan Wilkins, Lionel Davidson, Stephen Tall, and Stanton A. Coblentz. However, it is H. Rider Haggard who gave the ancient Lost Worlds and Races theme its modern popular form and became an idol for imitators. His well-known novels include *King Solomon's Mines* (1885) which is considered the genesis of the Lost World literary theme and which is the first novel of African adventure. The story is set in an unexplored region of Africa where a group of adventurers set off in search of the missing brother of one of the members of the group, and in the process they find the treasure mine of King Solomon and discover its secrets. Another novel in this tradition is titled *She* (1886) which tells the story of two French officers who discover the Lost City of Atlantis in the midst of the Sahara and they fall in love with its beautiful queen. The story of Atlantis which appeared in

Haggard's novel is perhaps the most recurrent in books and movies about Lost Worlds till the present time. The Lost World of Atlantis appeared first in the Greek philosopher Plato's book *Timaeus* (360 B.C.) in which he described a powerful empire located on an island named Atlantis in the Atlantic Ocean. About 9000 years before the time of Plato, a violent earthquake made the island sink into the ocean, never to be seen again. In 1882, Ignatius Donnelly, an American politician, wrote a book titled *Atlantis the Antediluvian World* in which he joined the belief of Plato, but as scientists who explored the bottom of the Atlantic found no sign of a sunken island, Donnelly's theories could not be taken seriously. Since then Atlantis has become the most preferable theme of Lost World stories which began with Jules Verne's *Twenty Thousand Leagues Under the Sea* (1828) which includes a visit to sunken Atlantis aboard Captain Nemo's submarine *Nautilus*.

Edgar Rice Burroughs is another writer who contributed extensively to the expansion of the theme of Lost Worlds in science fiction and he was considered Haggard's successor in this field. Among his novels of Lost Worlds *Tarzan* series (began in 1912) features the discovery of several lost cities and cultures including the lost city of *Opar*, said to be a colony of Atlantis which appears mainly in the second Tarzan novel, *The Return of Tarzan* (1913), and in the fifth, *Tarzan and the Jewels of Opar* (1916). Besides, in *The Maracot Deep* (1929) Arthur Conan Doyle – the author of *Sherlock Holmes Adventures* – describes the discovery of the sunken remains of Atlantis by a sea expedition. Doyle tells in the story that the island is still inhabited by a society that has adapted to life underwater. On the other hand, Atlantis has been for decades featured in movies and science fiction TV series including the well-known *Atlantis, The Lost Continent* (1961) by George Pal, *Warlords of Atlantis* (1978) by Kevin Connor, science fiction series *Stargate Atlantis* (2004), and the

British series *Doctor Who* (1963-1989). Taking into account that all Lost World stories have little to offer on the scientific basis, they represent in reality an opportunity for setting up imaginary utopias and dystopias and they remain literally romantic adventure in the science fiction tradition.

Primitive science fiction also explored other scopes in the process of rediscovering the world and the environment in which humans used to live. It is essentially from the gothic that elements of modern science fiction are derived. The gothic is basically a romantic tradition in literature which combines horror and romance with elements of the mysterious and the supernatural. The gothic appeared first as a reaction to the emphasis on reason which dominated the intellectual world of the 18th century when men of science as Isaac Newton and Adam Smith explained how the world is ruled by order and physical laws. The reaction was by finding a room for mystery, evil, and the inexplicable. In fact, the gothic movement emphasises danger and fear from the outside either physical or psychological; therefore, its prominent features include terror, madness, hereditary curses, death, haunted houses, and its major characters are ghosts, magicians, vampires, monsters, demons, and perambulating skeletons.

The first who is believed to have invented the gothic romance is the English author Horace Walpole with his novel *The Castle of Otranto* (1764), which displays mystery and an ancestral curse as well as countless trappings with hidden passages, all in a medieval gothic castle. The other writer who contributed to the movement is Ann Radcliffe in her novel *The Mysteries of Udolpho* (1794), which is replete with incidents of physical and psychological terror and supernatural events surrounding a persecuted heroine who suffers imprisonment in a castle after the death of her father.

The gothic movement was then given impetus throughout the 19th century by science itself when writers began to search a rational interpretation of the mysterious and the once inexplicable. Such is the case of Mary Shelley's *Frankenstein* (1818) along with the works of E. T. A. Hoffmann and Edgar Allan Poe who both assimilated scientific elements into the gothic. In his critical work ***Billion Year Spree*** (1973) Brian W. Aldiss insists that science fiction "is characteristically cast in the gothic or post-gothic mould" (Aldiss 1973: 8). However, many of the mysteries involved in early fiction are still inexplicable and remain a subject of horror science fiction which is intended to scare and horrify. The tradition of horror in science fiction flourished thanks to such writers as John William Polidori in "The Vampyre" (1819), Edgar Allan Poe in his short story "The Fall of the House of Usher" (1839), and Bram Stoker in *Dracula* (1897). The elements developed in the gothic and horror fiction constitute today the themes which are accepted in modern science fiction although in spirit they are opposed to the outlook of the scientist. John Clute and Peter Nicholls explain how the gothic and science meet in science fiction:

> *There has always been a tension in science fiction between the classical desire for order and understanding and the romantic desire that the Universe should continue to surprise us, hold secrets and malignities. This latter desire (or fear or both) is the gothic, and its coexistence with the classical or cognitive, in most major science fiction writers of our century, is not a paradox; the place where the two forces meet (cognitive and gothic) might almost be described as the central place where science fiction happens. . . Science fiction remains a romance literature. Its vaunted sense of wonder arises as much from its gothic as from its scientific elements (Clute and Nicholls 1999: 511).*

Following Mary Shelley's *Frankenstein, or the Modern Prometheus* (1818), many works began to examine the nature of the universe and the role of man in the cosmos. Writers of science fiction attempted then to explore new themes in dealing with this role helped by the different new discoveries in science, mainly in astronomy, biology, anthropology, and physics. The one theme that attracted many

science fiction writers was and is still the notion of aliens and alien encounter. In fact, the notion of extraterrestrial life refers to life originating outside of earth and its existence remains till today theoretical as no evidence of such life has been accepted by the scientific community. The study and theorisation of extraterrestrial life is known as astrobiology which is an emerging field dealing with the question of whether life exists elsewhere in the universe using different other fields as physics, biology, biochemistry, geology, and philosophy to speculate about the existence of life on other planets. And since the question is a verifiable hypothesis, it is therefore a subject of scientific inquiry. Indeed, NASA hosts an Astrobiology Institute and many universities in the United States (Arizona, Penn State University, University of Washington), in Canada and in Britain now offer graduate degree programs in astrobiology.

The introduction of the theme of extraterrestrial life and alien creatures in science fiction is based on such speculation and it did not emerge until the late 19th century after the appearance of the theory of evolution and the notion of adaptation to available environments promulgated by Jean Baptiste de Lamarck and later by Charles Darwin. The idea of alien beings was first popularised by the French astronomer Camille Flammarion in his nonfictional *Real and Imaginary Worlds* (1864). However, many critics credit H. G. Wells for having written the first alien invasion story; he was the first to cast the alien as a genocidal invader, a conqueror and a coloniser of earth in his novel *The War of the Worlds* (1898). Indeed, it was in the United Kingdom that the evolutionary theory and the Darwinian concept of the survival of the fittest urged the writers of science fiction to view aliens as monsters and natural enemies of mankind.

The Wellsian tradition was soon adopted by the American writers of the pulp-magazine science fiction of the early 20th century who made use of the monstrous alien invaders. Edmond Hamilton was among the first to write stories of this kind portraying aliens as reptiles, arthropods, and molluscs (especially octopuses) in addition to sentient plants. Hamilton was very popular as an author of space opera involving encounters between humans and aliens. His works include *The Monster God of Mamurth* (1926) and *The Star Kings* (1947), and he contributed to all of the science fiction pulp magazines. Occasionally, pulp science fiction writers attempted to invert the Darwinian assumption of hostile aliens and put humans in the role of alien invaders who conquered other worlds. The most significant example is Edmond Hamilton's *Conquest of Two Worlds* (1932). The stories featuring the menace of aliens to mankind remained dominant in science fiction for many years and they maintained their popularity throughout the 20th century. The writers invented more horrific and sophisticated alien monsters especially in the 1940's and the 1950's. Notable examples include John W. Campbell's *Who Goes There*? (1938), A. E. Van Vogt's *Black Destroyer* (1939), and Murray Leinster's *First Contact* (1945).

The stories of aliens witnessed more development as their function became more effective juxtaposing human and alien for the sake of criticising various attitudes and values of the modern society. Aliens are used to expose and dramatise human follies in a world obsessed with militarism, colonialism, sexual and racial prejudices. These concerns are examined in many works including Clifford D. Simak's *You'll Never Go Home Again* (1951) and Eric Frank Russell's *Waitabits* (1955) which both attack militarism. Sexual prejudices are questioned in Theodore Sturgeon's *The World Well Lost* (1953) and racialism is attacked in *All the Colors of the Rainbow* (1957) of

Leigh Brackett. Besides, the politics of colonialism is well examined in Poul Anderson's *The Helping Hand* (1950) and Robert Silverberg's *Invaders from Earth* (1958). In recent years and with the development of militaristic science fiction (space opera), stories of war between humans and aliens retained much of its melodramatic appeal and would remain very much alive as a tradition as the scientific inquiry about extraterrestrial life goes on.

1.2.2.2. Time Travel and Space Travel

Another field of interest in science fiction is time travel in which the human body or consciousness is projected backwards into the past or forwards into the future. Writers have used different narrative devices for this purpose including extended sleep, drugs or time machines. The latter device, employed for the first time by H. G. Wells in *The Time Machine*, was a breakthrough in narrative technology providing science fiction with one of its most significant time travel facilities. The theme of time travel actually predates *The Time Machine* with the French writer Louis –Sébastien Mercier's *The Year 2440: A Dream if Ever There Was One* (1771) which describes the adventures of an unnamed man who falls asleep and finds himself in a Paris of the future. In *The Forbidden Best Sellers of Pre-Revolutionary France,* Robert Darnton writes about the story, "Despite its self-proclaimed character of fantasy, *L'AN 2440* demanded to be read as a serious guidebook to the future" (Darnton 1996: 120). A number of stories featuring time travel succeeded in the late 19th century with fantastic elements preceding the deployment of the technological time machine. A clearer example is found in Mark Twain's *A Connecticut Yankee in King Arthur's Court* (1889), in which the protagonist finds himself in the time of King Arthur after being hit with a sledge-hammer in a fight. However, and again,

Wells is often thought of as the father of the time travel story with *The Time Machine* (1895) which features time travel via technology rather than by supernatural means. In this sense, Wells's story is seen as an inspiration for all later science fiction stories about time travel. The list of time travel works that followed Wells's tradition includes Jack Williamson's *The Legion of Time* (1938) whose protagonist must join the Legion of Time to ensure that the best future must occur because his actions as an influential scientist will determine which of the societies will come (the utopian or the dystopian). Ray Bradbury's *A Sound of Thunder* (1952) deals with some changes in the past which produce large effects in the present, while Isaac Asimov's *The End of Eternity* (1955) makes use of "time police" that uses time machines to transfer goods between centuries and to make adjustments to improve the future. In *Slaughterhouse-Five* (1969), Kurt Vonnegut tells the story of a man who moves between various points in his life including the present, the past during the bombing of Dresden in World War II, and the future living on another planet with aliens. Among the contemporary science fiction writers who developed the theme of time travel we may cite *Timescape* (1980) by Gregory Benford which tells the story of a group of scientists in the future who try to warn scientists in the past about an ecological disaster. *The Anibus Gates* (1983) by Tim Powers is about a 20th century millionaire who has discovered the existence of gates that allow people to travel through time. John Birmingham features in *Axis of Time* (2004) a futuristic military task-force which is accidentally transported from 2021 to 1942. The story deals mainly with an altered version of World War II and the social changes that might result among the Allies. Although time travel has long been a major theme of science fiction genre and has been developed technologically and even science has expanded on this concept, it is still an open question whether it could be possible in reality.

Closely linked to the notion of time travel is the theme of alternate histories and parallel worlds (some writers and critics prefer the term "alternative histories") which has gained the interest of many science fiction writers from the beginning of the 20th century. In essence, alternate history is an account of a world as it might have become in consequence of some hypothetical change in history. Works which hold alternate histories as their basic theme are based on real historical events, and yet they display social, political or industrial circumstances that developed differently than they actually did. It is through a visionary experience that this kind of stories merged with cross-time travel between alternate universes. Therefore, the alternate histories subject has become a theme that belongs to speculative fiction and that takes its roots from history which is diverged from the history as it is generally known. The principal question asked by such stories is "what if history had developed differently?" This question has been the subject of hypothetical practice by many historians among whom Sir John Squire, the British historian, was the most popular. He edited a collection of essays entitled *If It Had Happened Otherwise* (1931 and expanded in 1972) in which some of the most common preoccupations of modern speculative historians are exhibited such as what would happen if the South had won the Civil War, if Hitler had won W.W. II, and If the atom bomb had been developed much earlier in history. In modern science fiction, it was Murray Leinster who first introduced the concept of alternate worlds into science fiction genre in "Sidewise in Time" (1934) which features timeline exchanges and an interaction between different worlds, including the Roman Empire, the Vikings and the actual world in the United States. Leinster's vision of extraordinary oscillation in time had a long-term impact on other writers and more specifically on Isaac Asimov who writes in his comments on the story in *Before the Golden Age: A Science Fiction Anthology*

of the 1930's (1974) that "Sidewise in Time" "always made me conscious of the 'ifs' in history, and this showed up not only in my science fiction, as in *The Red Queen's Race*, but in my serious books on history as well. I also used the alternate-history theme in enormous complexity, in my novel *The End of Eternity*." (wikipedia.org/wiki/sidewise-in-time)

Another serious attempt to construct an alternative history in science fiction was made by L. Sprague de Camp in *Lest Darkness Fall* (1939), in which a man slips back through time and begins to remould history by preventing the Dark Ages. In a parallel way, many science fiction stories in this vein have tended to go through the detailed process of historical development to examine possible alternative presents. For instance, Harry Tutledove and Richard Dreyfuss wrote *The Two Georges* (1995) which postulates what would have happened if the United Kingdom had retained the American colonies and George Washington and King George III had made peace. Similarly, Philip K. Dick wrote *The Man in the High Castle* (1962) which examines with full details an alternate history in which Nazi Germany and Imperial Japan won World War II. In many other stories, science fiction writers have tended to assume that our world is better than most of the alternatives. In Ward Moore's classic *Bring the Jubilee* (1953), a grim portrait is painted of the USA in which the Confederacy (the South) won the American Civil War with effects on the rest of the world. In other cases, a different idea has been highlighted and which assumes that our world might have turned out far better than it has according to different historical circumstances. The idea has been displayed by Harry Harrison in *Tunnel Through the Deeps* (1972) and S. P. Somtow in *The Aquiliad* (1983) in which the Roman Empire conquered the Americas.

More radical in alternate histories science fiction is the idea brought by Harry Harrison in *West of Eden* (1984) which consists of exploring the consequences of fundamental shifts in biological evolution leading to the survival of the dinosaurs. Likewise, Brian M. Stableford wrote *The Empire of Fear* (1988) in which he portrays 17th century Europe and Africa ruled by vampires that could live for centuries and that hold these continents in sanguinary thrall. Although the theme of alternate histories and universes discussed in all the above stories has commonly been accepted in modern science fiction, there is considerable debate within the community of historians and even scientists about the validity and purpose of this type of speculation.

Likewise, space travel or space flight has always been a hallmark of science fiction, and even though it had been initiated by earlier writers mythically, it has become a modern theme in science fiction with technological devices used for the exploration of space. The origins of space travel went back to the English Francis Godwin in *The Man in the Moone* (1638) in which he declares himself a believer in the Copernican system and the principle of the law of gravitation which supposes that the Earth's attraction diminishes with the distance. The story's hero tames large migratory birds that carry him to the moon where he discovers a new mythic environment. Besides, Cyrano de Bergerac wrote one of the most challenging novels of early science fiction *Other Worlds: Journey to the Moon* (1657) which describes a journey to the moon and his observations there. Jules Verne came later as the writer who made the first attempt in featuring space travel in science fiction with *From the Earth to the Moon* (1865). Nevertheless, these earlier lunar romances in the space travel tradition were commonly identified as mythical and fantastic voyages which

were concerned with transcending imaginative boundaries, and even the means by which space flights have been achieved have been of secondary importance to the mythical theme itself. The idea of flight into space became the central myth of modern science fiction in the beginning of the 20th century once the pulp-magazine science fiction writers began to be more interested in the future and in the effect of technology on society.

Among a whole series of probable developments was the suggestion that men might one day travel in space inside a flying machine; thus, many writers invented various devices to signify mysterious forces of propulsion to fly into space. For instance, H. G. Wells invented the antigravity "cavorite" in *The First Men in the Moon* (1901) and Garrett P. Serviss employed atomic powered "space-car" in *A Columbus of Space* (1909). By the 1930's, hard science fiction writers became convinced that the real space vehicles would be "rockets" which is a term coming from the Italian Rocchetta (little fuse), a small firecracker created in the 14th century and used in many parts of the world in battles. The notable example that shows the use of rockets in space flight is Arthur C. Clarke's *Prelude to Space* (1951) in which he recounts the launch of Prometheus, the world's first spacecraft powered by a nuclear reactor capable of reaching the moon.

After World War II, science fiction witnessed considerable sophistication of the myth of spaceflight especially in *The Man Who Sold the Moon* (1950) by Robert Heinlein which features a fictional first moon-landing assured by a nuclear fuel produced in an orbiting reactor. And very soon, space exploration had been actually launched driven by "space race" between the Soviet Union and the United States during the Cold War period as a competition for geopolitical interests. The Soviet

Sputnik 1 was the first man-made satellite to orbit the Earth in 1957. This step was followed by other achievements including the first human spaceflight –Yuri Gagarin aboard Vostok 1 in 1961 which opened an entirely new era in human spaceflight. Yet science fiction writers became somehow annoyed after Neil Armstrong's moon-landing in 1969 when they began asking what they would find to write about in the future as the travel within the solar system has been demystified and the space programme has become routine. The new generation of science fiction writers continued therefore to operate within a real context with elements of the myth. Examples of such writers include Nigel Balchin in *Kings of Infinite Space* (1967), Barry N. Malzberg in *The Falling Astronauts* (1971), and Dan Simmons in *Phases of Gravity* (1989). *The Falling Astronauts*, for instance, is a story of panic in deep space, of crewmen who are threatened by a nightmarish incident that would engulf the world.

In this vein, it is also worth mentioning that alien starships are invested in science fiction stories with even more mystique than those constructed by humans. The best examples include Arthur C. Clarke's *Rendezvous with Rama* (1973) which is a story about a group of explorers in the 22nd century who intercept an alien starship that passes through the Earth's solar system in order to unlock its mysteries. The other novel is *The Tommy Knockers* (1988) by Stephen King, which is a horror novel and it deals with the discovery by the residents of a town in Maine of a mysterious metal object buried in the woods. The object turns out to be a portion of an alien spacecraft that releases an odourless gas which transforms people into beings similar to the aliens. On the other hand, alien starships have been a subject of a countless number of motion pictures among which we may cite *Close Encounters of the Third kind* (1977) by Steven Spielberg and *The Abyss* (1989) by James

Cameron on the basis of which a novel was written under the same title by Orson Scott Card in 1989.

1.2.2.3. Modern Science and Technology in Science Fiction

More involved in scientific and technological practice is the theme of robots and artificial intelligence that are developed in modern science fiction with both scientific and fictional investment. As far as robots are concerned, the term is a coinage by the Czech Karel Capek in his play *R.U.R: Rossum's Universal Robots* (1921) and is derived from the Czech word "robota" which means "statute labour" or "forced labour". Capek's robots were artificial human beings of organic origin, but the term is applied to machines or devices that sometimes resemble humans and that perform a variety of tasks on command or by being programmed in advance. Robots and automatons are sometimes used interchangeably. Ever since they have been in use, major developments in microelectronics and computer technology have led to significant advances in the field of robotics. High-performance robots are designed for many purposes in manufacturing, laboratories, medical surgery, agriculture, nuclear site inspection and in many other fields. The term robot in science fiction generally overlaps with humanoid and android which are usually used interchangeably. The word humanoid refers, in fact, to a being whose body structure is like that of a human and it is applied to either mythological creatures or artificial organism and machines (robots). The fictional humanoid has the same body outline as a human but the difference lies in some details such as horns, ear form, size of nose, form and colour of skin, tails, and taxonomic lineage which may be descending from reptiles or rodents. In many science fiction stories, reptilian humanoids are a common concept. Similarly, the term android is used to mean man-like or artificial

human and its first modern use in fiction was by Jack Williamson in *The Cometeers* (1936).

Although the first truly modern robot, digitally operated and programmable, was invented by George Devol in 1954 when integrated circuits were invented for computers, the idea of human-like being appeared in science fiction long before that invention. *Frankenstein* (1818) by Mary Shelley, claimed to be the first novel of science fiction, was the first story to feature the theme of a monster robot. The creature is essentially a robot made from protein-based parts by a young student named Frankenstein. The robot soon begins to advance beyond its creator and then seeks revenge on him. Surprisingly, the story of Mary Shelley was the original source of fears and anxious concerns about robots which were expressed in a wide range of stories and films in modern science fiction. In fact, the principal fear stems from the possibility that the robots' intelligence could exceed that of humans, and thus they would upgrade themselves and they would take over or destroy the human race. Likewise, robots can be dangerous if they are programmed to kill, and this is considered the most dangerous and malicious use of robots. Manuel De Landa, a contemporary American writer and philosopher, claims in his book *War in the Age of Intelligent Machines* (1991),

> *Humans are at a critical and significant juncture where humans have allowed robots, "smart missiles", and autonomous bombs equipped with artificial perception to make decisions about killing us ... This represents an important and dangerous trend where humans are transferring more of our cognitive structures into our machines (De Landa, 1991: 79).*

Due to the "Frankenstein syndrome", early stories about robots were generally ambivalent and they exposed robots in a threatening image as in Harl Vincent's "Rex" (1934) which is about a robot that takes over the world and is about to remake man in the image of the robot when it is finally overthrown. Robots are even given

higher status than humans in “Farewell to the Master” (1940) by Harry Bates -later made into a film *The Day the Earth Stood Still* (1951) - which portrays alien robots “who” have absolute power over the Earth’s leaders and “who” come to warn them about any outbreak of violence. In the meantime, Isaac Asimov appeared as the most outstanding science fiction figure who contributed greatly to reducing “the Frankenstein complex” which dominated early science fiction stories involving robots. Asimov invented his famous Three Laws of Robotics which are known for being a set of behaviours for robots to keep them harmless and at the service of their human creators. These laws which all robots in his fiction must obey were first introduced in his short story “Runaround” (1942) which appeared in his collection titled *I, Robot* (1950) whose stories focus on the theme of robots and their interaction with human beings. The Laws of Robotics of Asimov state that,

> *a) A robot may not injure a human being or, through inaction, allow a human being to come to harm, b) A robot must obey orders given to it by human beings except where such orders would conflict with the first law, c) A robot must protect its own existence as long as such protection does not conflict with the first or second law (Quoted by Nicholls and Clute 1999: 1018).*

Following these rules, robotic characters have been described in various stories as obedient servants of humans thus destroying the earlier image of danger and fear created by the terrifying creature of Frankenstein. For instance, in “No Woman Born” (1944) by Catherine Lucille Moore, the mind of a woman actress is resurrected in a robot body after she died in a theatre fire. Achieving greater success, she later confides that the robot condition is better than the human although she feels lonely because she wishes there could be others like her. And in *City* (1944), Clifford D. Simak portrays the robot servants that survive mankind as perfect gentlemen rather than slaves.

After 1945, when the atom bomb raised a new suspicion of technology, the earlier fears about robots came back and the attitudes toward robots in science fiction became more ambivalent again. So most robot stories of the 1950's reflect profound anxieties concerning the relationship between man and machine and they so often portray some kind of confrontation and conflict. For instance, robots are presented as killers of humans in such stories as "Lost Memory" (1952) by Peter Phillips, "Second Variety" (1953) by Philip K. Dick, and "Robots Should Be Seen" (1958) by Lester Del Rey. Even Asimov brought this anxiety into focus in his novels of the 1950's *The Caves of Steel* (1952) and *The Naked Sun* (1956) which deal with highly mechanised environments and anti-machine prejudices. Even though the post-Hiroshima anxiety became less prevalent in the science fiction of the late 1950's and 1960's with more relaxed attitude to the robots, homicidal or killer robots have never become extinct and they made their greatest comeback during the following three decades. Among the most notable examples featuring dangerous robots we may cite Roger Zelazny's "Home is the Hangman" (1976), about a space-exploration robot that returns to Earth to kill its creators, and John Thomas Sladek's *Tik-Tok* (1983) about a robot psychopath whose Asimov's First Law of Robotics (circuits) fail and thus "he" becomes murderous. Besides, the relationship between humans and robots has been strongly highlighted by Philip K. Dick whose work confirms the identification of man and robot more than any other science fiction stories do. Indeed, he usually preferred the term "android" rather than "robot" to stress this identification and relationship. This idea appears clearly in *Do Androids Dream of Electric Sheep* (1968) and *We Can Build You* (1969) which both include humanoid machines called androids and designed as humans characters. Philip K. Dick clarifies better this idea in his essay "The Android and the Human" (1972) by stating,

> *Someday, a human being may shoot a robot which has come out of General Electrics factory, and to his surprise see it weep and bleed. And the dying robot may shoot back and, to its surprise, see a wisp of gray smoke arise from the electric pump that is supposed was the human's beating heart. It would be rather a great moment of truth for both of them (Quoted by Asimov 1985: 81).*

In addition to androids, the term "cyborg" came to use in science fiction as another kind of humanlike machine yet with different properties. The word is a contraction of "cybernetic organism" and refers to the product of human/machine hybridisation which means that cyborgs are an integration of organic and synthetic or artificial parts, and they frequently pose the question of difference between human and machine. The idea appeared in many science fiction stories which register many people's discomfort with the increasing reliance on technology. Among the wide range of works about cyborgs we may cite Martin Caidin's *Cyborg* (1972) which tells the story of a man whose damaged body parts are replaced by mechanical devices, and Richard Lupoff's *Sun's End* (1984) and *Galaxy's End* (1988) which both feature the cyborg superman that has become commonplace in contemporary science fiction stories and films. Carole Nelson Douglas's *Probe* (1985) is about a girl who appears mysteriously in Minnesota without identity; she is confined to a psychiatrist to take care of her until it is revealed that she is a "probe" (cyborg) sent from an alien world to gather intelligence about humankind and later the psychiatrist discovers that she could kill with her telekinetic powers.

The idea of cyborgs and androids was a recurrent theme in science fiction films which helped gain more popularity for the genre and led to the large spread of stories involving humanlike creatures. The list of films comprises essentially *Saturn 3* (1980) by Stanley Donen which is set in a spacecraft in orbit about Saturn where the captain is murdered by a pilot who creates an android by placing the captain's brain in the machine. The android becomes homicidal and the creator tries to get rid of it

before things get worse. *Blade Runner* (1982) by Ridley Scott, based on Philip K. Dick's novel *Do Androids Dream of Electric Sheep?* (1968), depicts bio-robotic beings called "Replicants" created for labour tasks on the Earth's colonies and are pursued by police units called "blade runners" to kill them after they have escaped to Earth. Besides, *Android* (1982) by Aaron Lipstadt is about an illegal android program launched by two scientists in their laboratory on a space station and one of the scientists is revealed to be an android himself. In another very popular movie about cyborgs, *Robocop* (1987) by Paul Vehoeven, it is dealt with the transformation of a police officer after being killed into a cyborg cop. The film was followed by its sequels *Robocop 2* (1990) by Irvin Kershner and *Robocop 3* (1993) by Fred Dekker. The story in *Robot Jox* (1990) by Stuart Gordon is set in a world devastated by a nuclear war after which the two superpowers, the Americans and their opposing enemy the Confederation, have battles disputing over world territories. The battles are fought by designed robots piloted by men inside them called jockeys or "Jox". *Eve of Destruction* (1991) by Duncan Gibbins displays a woman cyborg made by a research scientist in her own image for military purposes and yet the military cyborg turns into a super-destructive robot. Perhaps the most outstanding movie ever made by Hollywood featuring humanoid robots and which is still attracting millions of viewers all over the world is *The Terminator* (1984) by James Cameron and starring Arnold Schwarzenegger. The film introduces the concept of "the terminator" which is a cyborg assassin created by an artificially intelligent computer "Skynet" after the war between humans and machines started, and it is sent back from the year 2029 to 1984 to exterminate and wipe out humanity to pave the way for the machines to control the world. The terminator's mission is to kill Sarah Connor whose future son John will lead a resistance against machines, but Sarah is helped by a human sent

back from the future to protect her and who becomes the father of her future son. The model of the first terminator was featured in the subsequent films that were made to follow the fate of humanity in its war against machines. The second in the series is *Terminator 2: Judgment Day* (1991) by the same director which portrays how the machines attempt to kill John Connor as a child by designing a more advanced terminator. In *Terminator 3: Rise of the Machines* (2003) by Jonathan Mostow, Skynet sends back a new terminator to kill all resistants, including John and his wife, in a last attempt to ensure a machine victory. A fourth installment to the series is *Terminator Salvation* (2009) which concentrates on the war between humans and machines in the post-apocalyptic world.

More revolutionary in the construction and designing of robots is the adding of artificial intelligence which allows these machines to perform in a humanlike manner by identifying, selecting and assembling objects. Artificial intelligence is generally defined as the design of a system or a program, sometimes called artificial brain, which perceives its environment and takes actions which include reasoning, planning, communication and perception, and the ability to move and manipulate objects. Artificial intelligence research is more related to computers and is based on different scientific fields such as robotics, control system, computers science, data mining, and neuroscience; and its wide variety of applications include pattern recognition (speech, face, handwriting), diagnosis, language processing (such as translation), game theory, strategic planning, and e-mail spam filtering. In this field the computer revolution has achieved great advancements and has made artificially intelligent robots a possibility in the real world. This progress has been so rapid that science fiction has had to struggle hard to keep up with actual developments. Similar to their attitudes to robots, science fiction writers have usually expressed their

opposition to artificial brains which rule society, and their opposition appeared in showing intelligent machines (whether robots or computers) going mad and turning against their creators. The fear that the mechanical mind would take over our lives was manifest across many science fiction stories such as *Vulcan's Hammer* (1960) by Philip K. Dick which is set in 2029 when the Earth is run by the Unity organization that controls human lives through the Vulcan series of artificial intelligences. Another example is *Valentina: Soul in Sapphire* (1984) by Joseph H. Delaney and Marc Stiegler, it is about a woman hacker who is an accidentally-created artificial intelligence in the form of a worm taking over any computer to which she can make connection. The theme has also been the subject of a film by Steven Spielberg titled *A.I.: Artificial Intelligence* (2001) which relates the story of a cyborg child named David created by a company called Cybertronics and programmed to love and to have desire. The company wants to test this creation and thus David is placed with a family whose only child is dying of a rare illness. As David continues to live with the mother, he loves her as her proper child and tries to find the Blue Fairy, the being who has the power to turn him into a real boy to preserve the mother's love for him.

The other more scientifically complex subject treated in contemporary science fiction is the theme of cyberpunk. Cyberpunk was originally coined by Bruce Bethke as a title for his short story "Cyberpunk" (1983), and it came to mean highly advanced science with radical changes in the social order. It was not until the publication of William Gibson's first novel *Neuromancer* (1984) that the term began to come into general use; in fact, it is Gibson's novel that has defined the essence of the theme to which "cyberpunk" refers. Cyberpunk is derived from two words: cybernetics and punk. The first word was coined by the American mathematician

Norbert Wiener in 1947 with the publication of his book *Cybernetics* (1948), subtitled *Control and Communication in the Animal and the Machine*, to describe a new cross-disciplinary science which is concerned with the way systems work and the way they process information (often through a process known as "feedback"). This system can be a machine or a human body. Thus cybernetics connects different fields including control systems, electrical network theory, mechanical engineering, evolutionary biology, neuroscience, and neuropsychology. This is why cybernetics is described as the interdisciplinary study of structure of complex systems. Besides, cybernetics is often related to the creation of artificial intelligence as researchers tend through the analysis of neural systems (i.e. the brain) to synthesise simulated intelligences which begin as machines and then develop to be self-aware and self-programming. The first step towards the creation of artificial intelligence was the computer, but the question which was raised by cyberneticians was whether the machine could have free will and consciousness since, from their materialistic view, the human mind is itself no more than a complex cybernetic system.

The second part which forms the term cyberpunk is "punk" which comes from the rock'n'roll terminology of the 1970's and which refers to a movement among young people that appeared in the United States and which was aggressive, alienated and offensive to the established values of society. The movement's adherents were opposed to the values of wealth and science-based society, expressing this opposition in loud punk rock music accompanied with violence and rude words. The combination of "cybernetics" and "punk" gave rise to a world situation described by many science fiction writers as being dark and gloomy with networked machines dominating the lives of humans and with giant and powerful corporations replacing

governments as centres of political, economic and military power. According to Lawrence Person, an American science fiction writer and critic in his famous critical article "Notes Toward a Post-cyberpunk Manifesto" (1998):

> *Classic cyberpunk characters were marginalized, alienated loners who lived on the edge of society in generally dystopic futures where daily life was impacted by rapid technological change, a ubiquitous data sphere of computerized information, and invasive modification of the human body (http://news.slashdot.org).*

Therefore, the cyberpunk stories involve basically hackers, artificial intelligences and mega corporations which are featured in constant conflict in a near-future Earth dominated by technology and networking systems. Critic David Brin stresses the above idea by stating in his book *The Transparent Society* (1998):

> *A closer look at cyberpunk authors reveals that they nearly portray future societies in which governments have become wimpy and pathetic . . . Popular science fiction tales by Gibson, Williams, Cadigan and others do depict Orwellian accumulations of power in the next century, but nearly always clutched in the secretive hands of a wealthy or corporate elite (Brin 1998: 83).*

The cyberpunk world is a world in which ordinary and marginalised humans are dominated and controlled by a system (multinationals, totalitarian states, corporations) which uses advanced science and technology to maintain a state of mind-numbing and total control of the body and the brain. In fact, it is by the means of "biotronics", a combination of technology and biology where electronic devices can directly be interfaced with living organisms, that humans become parts of the machine (cyber) and only the cyberpunks can revolt and remain free and conscious of the manipulations (punks).

Alongside the controlling power of corporations and technology, cyberpunk stories have also depicted what has come to be known as the "virtual world" which is represented today by the Internet (the International Network: one of the various

networks of the system). A virtual world is a computer-based simulated environment which is often an imitation of real natural systems in many different fields of life including physics, chemistry, biology, engineering, and also human systems in economics, psychology, and social sciences. Through the internet the users have become the new dwellers of the virtual world wherein they can interact and communicate and even practice multiplayer online games with real world rules, yet action takes place online in cyberspace. It is the space where the line between machine and human mind becomes blurred; the mechanical computer system and the human neural system are directly connected. Therefore, the border between the actual and the virtual reality exists no more. In cyberpunk stories, the Internet appears under various names such as "cyberspace", "the wired", or "the matrix". The latter word was used for the first time by the American computer scientist John Quarterman in his book *The Matrix: Computer Networks and Conferencing Systems Worldwide* (1989) in which he defines the term as the networks of computers connected together forming a worldwide supranatural entity. The term was highly popularised by the movie *The Matrix* (1999) by the Wachowski brothers.

Although the term cyberpunk was first coined by Bruce Bethke for his short story "Cyberpunk" (1983), it was William Gibson's novel *Neuromancer* (1984) which has been claimed to be the defining work of the cyberpunk theme and style. The novel tells the story of Case, a computer hacker who jacks his consciousness into cyberspace and steals encoded secrets until he comes across the wrong people who damage his central neurons system and make him unable to use the direct brain-computer interfaces required for access to the cyberspace. With his career lost, Case finds himself trapped in the high-tech underworld of Japan courting death and drug-addiction. A chance is given to him by a hired killer to cure his neurological damage

and to save him from drug-addiction in exchange for his services as a hacker to participate in a complex crime. *Neuromancer*'s setting is a near-future's world dominated by multinational corporations, artificial intelligence and violence. The novel examines the concept of virtual reality and cyberspace before they have become popular in nowadays culture. Gibson's first novel was followed by *Count Zero* (1986) and *Mona Lisa Overdrive* (1988) which constitute the Sprawl trilogy dealing with the same cyberpunk elements including artificial intelligence, corporations, cyberspace, violence and crime in a near-future world. Gibson inspired many contemporary science fiction writers who have tended to explore the impact of technology on the cotemporary social reality. Cat Padigan deals almost with the same theme elements in her cyberpunk novels in which she explores the relationship between the human mind and technology. Whether in *Mindplayers* (1987) or *Synners* (1991) or even *Tea from an Empty Cup* (1998), the central theme is the direct access to the mind via technology as she tried to affirm that the human mind is a real explorable place for perceptions. Rudy Rucker is one of the pioneers in the cyberpunk movement, and as a computer scientist, his major theme concentrates on the rapid technological change and its impact on human life. His major works appeared under the name the Ware Tetralogy which consists of four science fiction novels in the cyberpunk fashion: *Software* (1982), *Wetware* (1988), *Freeware* (1997), and *Realware* (2000). The other writers of cyberpunk science fiction have all contributed to the movement; the most prominent are Walter Jon Williams especially in *Hardwired* (1986) and *Voice of the Whirlwind* (1987), Greg Bear in *Blood Music* (1985) and *Queen of Angels* (1990), and Tom Maddox who was best known as a writing partner of William Gibson in two episodes of the *X-Files* and who wrote

Halo (1991) about the evolution of an intelligent computer by gaining self-awareness in the second half of the twenty-first century.

On the other hand, it is worth mentioning that just as cyberpunk has made science fiction more attractive to academics and critics with its revolutionary orientation, it has made it more profitable to Hollywood and its producers. In fact, cyberpunk reached Hollywood and became one of its staple science fiction styles. The first and the most influential movie featuring cyberpunk elements is ***Blade Runner (***1982) by Ridley Scott which is adapted from Philip K. Dick's novel ***Do Androids Dream of Electric Sheep?*** The movie's story depicts a dystopian Los Angeles in 2019 in which manufactured androids called "Replicants" are used as slaves for dangerous tasks on space colonies. Special police units called "Blade Runners" are designed to hunt and kill replicants on Earth. Since ***Blade Runner*** the number of films about the cyberpunk theme has grown steadily with such films as ***Hackers*** (1995) by Lain Softley which traces the adventures of two young hackers and their friends, ***Strange Days*** (1995) by Kathryn Bigelow, ***Minority Report*** (2002) by Steven Spielberg, and ***The Gene Generation*** (2007) by Pearry Teo in which hackers are hacking into DNA to kill people instead of hacking into computers.

And perhaps most central to the cyberpunk ethos is ***The Matrix*** (1999), a film by Larry and Andy Wachowski which portrays two levels of reality: the everyday real existence lived by humans and a deeper underlying reality perceived by humans and named the matrix. The central question which haunts the protagonist in the course of the film's action and around which the plot is built is "what is the matrix?" The setting of the film is a future in which a simulated reality is created by intelligent machines to dominate and subdue humans and to use them as tools for the machines'

survival. In this cyberpunk reality, a computer programmer and hacker Neo rebels against the machines after he discovers that the world he lives in is other than it appears and after he learns as a hacker about the matrix and its agents. Indeed, in this world billions of people are neurally connected to the matrix and their bodies' heat and bioelectrical energy are used as a source of energy for the machines instead of the solar power which disappeared as a result of a nuclear war. After being freed from this simulated reality, Neo is helped by another free human, Morpheus, in his fighting against intelligent machines to free humanity from the matrix. For this task Neo learns various martial arts disciplines and learns more about the matrix codes and the dangers he might encounter once he enters there. In the end he succeeds to control the whole network and promises the imprisoned humans that it is always possible to rescue humanity. Following the huge success of *The Matrix*, two other films in what was conceived as a trilogy were produced by the Wachowski brothers portraying the same world of machines in which humans are imprisoned. In both *The Matrix Reloaded* (2003) and *The Matrix Revolutions* (2003), human survivors of the nuclear war are threatened by an attack of a machine army, and Neo, the major character in the trilogy, learns more about the matrix secrets and he is finally the one who will end the war.

Another series of films which is made into a trilogy and whose developed theme of cyberpunk is one of the most exciting in Hollywood's history is The Terminator Trilogy. It is a series which features the battles between the artificially intelligent machines of Skynet, a computer-based military defence system, that turns on its creators, and Sarah Connor and her son John who will become the leader of the human rebels against machines. In *The Terminator* (1984) and *Terminator 2: Judgment Day* (1991) by James Cameron, *Terminator 3: Rise of the Machines* by

Jonathan Mostow, and *Terminator Salvation* (2009) by Joseph McGinty Nichol, Skynet decides to send cyborg killers called terminators from the year 2029 to different points in John Connor's past even before his birth to terminate him using time dilation device in an attempt to stop human rebellion against machines' rule.

As a result of the huge technological progress of the late 20th century and the rapid changes it brought to human society, it seems that it is no longer possible to write contemporary science fiction without exploring the way man interacts with, and in turn transformed by the new technologies. As the theory applies to cyberpunk, it equally applies to genetic engineering in the process of transforming the nature of human beings and other species. Genetic engineering or genetic technology came as a result of the tremendous developments in the biological sciences in the second half of the 20th century and is defined as the scientific alteration of genetic material in a living organism by the creation of recombinant DNA which is inserted into the genes of a host cell. It is actually DNA that provides for all living organisms the genetic characteristics related to either the physical and behavioural traits or mental abilities. Gene modification has generally been carried out on mice and other animals while human genetic engineering is still in its beginning regarding the various legal and ethical restrictions and thus it remains a subject of fictional practice. Genetic engineering is of two kinds: somatic modification which involves injecting genes to cells other than egg or sperm cells and the resulting characteristics are non-inheritable and would not be passed to the offspring of the recipient. Germ line engineering, on the other hand, involves the insertion of genes in eggs, sperm or very early embryos giving new traits that would appear in all succeeding generations.

The idea of possible alteration of human beings and other species had occasionally been a subject of science fiction stories even before the new discoveries in biology and genetics were made. In the first half of the 20th century nothing was known about the biochemistry of genetics until the 1950's when the genetic engineering of bacteria has become commonplace following the decipherment of the genetic code carried by DNA molecules in 1953. Nevertheless, science fiction stories written before that time dealing with certain transformation or modification in the form and nature of humans and other species were considered merely an anticipation of possible practical applications of direct genetic manipulation. The first writer who introduced the theme in science fiction was Herbert George Wells in *The Island of Dr. Moreau* (1896) which deals with the dissection of a living organism by surgery, and it was made into a film version in 1996 by John Frankenheimer with the same title, but the movie deals with the use of human DNA in animals to transform them into humanlike creatures. Other works succeeded especially in the American science fiction pulp magazines including Aldous Huxley's *Brave New World* (1932) which features a utopian world achieved by biological engineering and reproductive technology which make all humans happy for ever, A. E. Van Vogt's *Slan* (1940) which is about the creation of supermen by using gene transformation, and Robert Heinlein's *Beyond This Horizon* (1942) which describes a society that attempts to ensure physical and mental fitness of people by using eugenics and genetic engineering. For the technique of eugenics, it refers to the direct improvement of human traits and capabilities in an attempt to create stronger, healthier, and more intelligent humans through genetic engineering or in vitro fertilisation. The idea exists only as a social philosophy as research and experimentation in human genetic modification have been hampered by ethical and moral concerns. Indeed, people in

current scientific and cultural circles view eugenics as a threat to humanity and to the genetic diversity with its racist and discriminative feature to the point that it has usually been associated with the racial politics of Nazi Germany, although the scientists who advocate the practice usually defend their programmes as being for the purpose of preventing fatal genetic diseases. In some science fiction stories eugenics has been developed especially as a means to create genetically selected soldiers or super soldiers for combat in future wars; the most notable example is *Ender's Shadow* (1999) by Orson Scott Card which presents the failure of a eugenics experiment that aimed at creating a child genius with genetic enhancements to be a super soldier, the experiment results in gigantism and unstoppable physical growth which leads to premature death.

Moreover, after the decipherment of the genetic code in 1953 science fiction writers began to explore the human interior and to go further into the speculative and fictional genetic experiments carried out mainly by James Blish who was among the first writers who have provided a better understanding of possible genetic engineering techniques. His major and best work remains his collection of stories *The Seedling Stars* (1956) which shows the utility of genetic engineering in adapting humans for the colonisation of other worlds through the process of pantropy. Pantropy involves a modification of humans via genetic engineering to enable them to adapt to the new environment of a colonised world instead of terraforming other planets to make them habitable by humans. Philip K. Dick offered his contribution to the movement with his novel *The World Jones Made* (1956) which is set in the post-apocalyptic age after a devastating nuclear war which brings about the rise of a dystopian world. The emerging Federal World Government allows freedom of belief, but humans become entertainment objects because of the mutagenic effects of

radiation and the deliberate genetic engineering practiced to allow genetically engineered humans to settle Venus. It is Floyd Jones who challenges the new establishment and overthrows the Federal World Government.

More alarming in the practice of genetic engineering techniques for the improvement of human capacities or for changing form is that they might have unforeseen and unfortunate side-effects and unpredictable catastrophic results which are depicted by a lot of writers. For instance, *Sight of Proteus* (1978) by Charles Sheffield deals with techniques used by a scientist to change human appearances and physical abilities. These changes are regulated by a legal office which discovers that illegal and radical form changes using DNA from inhabitants of other planets are practiced. Geoff Ryman's *The Child Garden* (1989) exposes another problem of using genetic engineering techniques for curing cancer in children and which appears to have the unfortunate side-effect of increasing the speed of ageing rapidly and thus children must become adults within few years. *Mutation* (1989) by Robin Cook, on the other hand, tells the story of a medical scientist whose experiment on his own son leads to a mutated abnormal child with high intelligence quotient but with no emotions.

An important development closely related to genetics is that of mutation which was regarded as an evolutionary factor in the modification of genes made by the mutagenic properties of radiation and which has come to refer to the deliberate scientific alteration of individual genes. Mutational romance has become a staple of science fiction stories with the irradiation of various creatures frequently producing giant monsters or the irradiation of humans causing metamorphoses into supermen. After the explosion of the atom bomb in1945, the mutational stories have been taken

to the ultimate extreme especially by Greg Bear in *Blood Music* (1985) which is about a biotechnologist who creates biological computers based on his own lymphocytes (a type of white blood cells in the immune system). The scientist is obliged to inject his new product into his own body not to be destroyed by his employer, and the result is that they evolve and multiply rapidly and change genetically to transform the scientist himself and later other humans. Bear's novel has been credited as being the first fictional work about nanotechnology which is a field that combines applied science and technology in the control of matter on the atomic and molecular scale allowing Bear to create his biological computer in the novel.

In recent years, science fiction writers have followed the same vein in exploring the real potential which genetic engineering technologies hold for the possible radical remaking of the human nature and the different changes caused by evolutionary factors. Indeed, a lot of novels vary in their treatment of the theme from the uncontrolled mutation to the deliberate alteration of species. For instance, the *Moreau* series of novels by S. Andrew Swann are set in the mid-19th century after apocalyptic wars and they feature animal-human hybrids called Moreaus created as soldiers through genetic engineering. In the end of the series, the Moreaus discover a secret government plot to exterminate them by using an engineered variant of a virus. The novels which constitute the Moreau series are: *Forests of the Night* (1993), *Emperors of the Twilight* (1994), *Specters of the Dawn* (1994), and *Fearful Symmetries* (1999). Another novel with similar concern but involving animals instead of humans is *Oryx and Crake* (2003) by Margaret Atwood which examines the creation of transgenic animals by genetic engineering such as "wolvogs" (hybrids

between wolves and dogs), “rakunks” (raccoon and skunk), and “pigoons” (pigs and baboons).

And as genetic engineering has already begun to reshape plants and animals, it will certainly take direct control of human biology in the future by transforming the most fundamental aspects of human nature. In fact, the completion of the sequencing of the human genome in 2001, which represents the structure of DNA and its encoding hereditary information carried by genes, has greatly increased the possibilities of human genetic transformation and of finding cures for many deadly diseases. More important, it has opened the door wide for science fiction to go further in its speculative and fictional genetic manipulations. One of the most controversial results of advanced genetic experiments is gene cloning which refers to the creation of copies of DNA fragments, cells or organisms with identical genes, and thus the obtained copies are genetically identical carrying the same characteristics and traits. The process of gene cloning involves a wide range of biological sciences including genetics, molecular biology, biochemistry, and immunology. This revolutionary step in the field of genetic engineering has found wide response in contemporary science fiction although science fiction had explored cloning and its perils long before it was made possible with the sheep Dolly in 1997. For example, Kate Wilhelm’s novel *Where Late the Sweet Birds Sang* (1976) traces the fate of the human race in a near future when the effects of pollution lead to general infertility in humans and other species. To maintain humanity in the face of complete extinction, scientists rush their cloning program with the result that future generations of clones are not only different of their original genotype but also a bad copy. Another novel dealing with the dangers of cloning is *The Clone Rebellion* (1980) by Evelyn Lief which is about the rebellion of clones made by a doctor to

serve as Central Processing Units of enormous computers. The enslaved clones are helped by the doctor's daughter to regain their freedom and achieve life as human beings.

In parallel, cloning other species and more particularly extinct species has been the interest of many science fiction writers before being the concern of scientists themselves, and the most extravagant example is the idea of dinosaur cloning which has occupied the minds of writers and filmmakers who have tried to get humans and dinosaurs live together at the same time and in the same place. However, as in most other cloning science fiction, the experiments go horribly wrong with fatal results. The best example in this way is *Jurassic Park* (1990) by Michael Crichton which tells how dinosaurs are cloned through the recovery of DNA from fossilised parts of a dinosaur which gives scientists a complete genetic blueprint for a dinosaur. The cloned dinosaurs are designed to be placed in an amusement park installed by a billionaire on an island in Costa Rica. The fatal episode occurs when the cloned dinosaurs escape from the park, attack the population and destroy everything on their way until the Cost Rican Air Force comes to raze the whole island. Crichton's story was adapted into a successful film with the same title by Steven Spielberg in 1993. In fact, it is in the cinema that the theme of genetic engineering and more particularly gene cloning are well featured and the list includes a wide range of films including *Multiplicity* (1996) by Harold Ramis, *Alien: Resurrection* (1997) by Jean-Pierre Jeunet, *The 6th Day* (2000) by Roger Spottiswoode, *Godsend* (2004) by Nick Hamm, and *Star Wars Episode II: Attack of the Clones* (2002) –a film in the Star Wars saga- by George Lucas.

With the richness and variety of science fiction writing and film production dealing with the theme of genetic engineering and its related sub-themes, readers and science fiction fans would unmistakably discover that fiction has gone far ahead in speculation and extrapolation about the future existence of humanity and even of other species with no legal, moral or ethical restrictions. However, there is a major question that remains insistent in everyone's mind; it is whether scientific research and achievement must catch up with the fiction.

1.2.2.4. Psionic Powers

In a completely different field which belongs more to psychology rather than to pure science, science fiction writers have explored another frontier in human nature which has raised many questions about its real existence; it is Psi powers or powers of the mind. Psionic powers is also known as ESP (Extra-Sensory Perception) and it refers to the full spectrum of mental powers or energy transfer by the mind studied by para-psychology and includes such psychic and paranormal phenomena as telepathy, telekinesis, precognition, clairvoyance, and teleportation. These psychic phenomena are the subject of study of the science of para-psychology which involves different research methodologies such as laboratory research and fieldwork. And yet this field is still struggling to achieve recognition among the established scientific community since the studied phenomena have often been unexplained and even judged inexplicable in terms of known physical or biological mechanisms. Para-psychological studies and research had been launched in 1882 by the British "Society for Psychical Research" and in 1885 by "American Society for Psychical Research" which were the oldest organisations to examine perceptual paranormal phenomena and to support scientific investigation of the psychic unexplained mental powers

using scientific principles. However, alongside the undertaken scientific research, the Psi powers were considered to belong to the repertoire of powerful magicians and most were featured in occult romances which often explore themes related to the supernatural phenomena and more particularly to sorcery and magic. As such, para-psychology and psionics (the applied usage of Psi powers popularised for the first time by John W. Campbell in the 1950's) were dismissed by much of the scientific establishment and even by psychologists themselves because they are believed to lack solid scientific evidence and they are difficult to reproduce in laboratory experiments. In an article titled "Does Psi Exist? Replicable Evidence for an Anomalous Process of Information Transfer," Daryl J. Bem and Charles Honorton answer the question by stressing that, "most psychologists don't think so . . . We psychologists are probably more sceptical about Psi for several reasons" (Daryl & Honorton 1994: 4). On the other side, Sylvia Engdahl, an ardent advocate of the existence of Psi powers in her recent novel *Stewards of the Flame* (2007), claims that "We are stewards of something in humankind that our civilization no longer fosters: the awareness that we are more than our bodies, that the human mind and spirit is a tangible force that is no less real for being nonphysical" (sylviaengdahl.com). She even explains that Psi powers

> *aren't in any sense supernatural; they are simply human (and in some cases animal) capabilities that we don't yet understand …Genuine psychics with conscious control of their powers are rare, to be sure; most Psi occurs unconsciously. In my opinion unconscious Psi has been, and still is, vastly more prevalent than anyone imagines and has had a major impact on human history. Why isn't this recognized? …I believe the conscious development of human Psi abilities lies in the future …It is not some abnormal mutation, as in science fiction it's often assumed to be; I believe all human beings have the potential for it, though of course there will always be degrees of talent (towardtomorrow.blogspot.com).*

Accordingly, despite the fact that para-psychology and psionics are so much controversial and are still disputed subjects, the possibility that the human mind may have abilities which are unknown and beyond the reach of accepted science constituted another space of exploration for science fiction. The entire spectrum of the psychic powers consists of telepathy, telekinesis, clairvoyance, precognition, and teleportation. Telepathy refers to the mental communication between two or more minds or simply the ability to read the thoughts of others (passive telepathy) or send a message into another's mind (active telepathy). Many science fiction stories deal also with a restricted kind of telepathy, empathy, in which feelings instead of thoughts are perceived. The second power is called telekinesis or psychokinesis and it involves the ability to move physical objects by the power of the mind although this appears to contravene or to act in opposition to the accepted laws of physics. Telekinesis is often connected in the minds of many people with its spectacular effects as depicted in science fiction such as lifting and moving objects or throwing them around. Clairvoyance, on the other hand, is thought to be the power of seeing and even hearing things or events which are not present to the senses. It is also called "the second sight" or "the third eye". In the popular culture, clairvoyance is often claimed by spiritualists and mediums who are believed to have direct relation with spirits. Closely related to clairvoyance is the power of precognition which refers to the vision or the knowledge of future events received in the form of a message to the mind. According to parapsychologists, precognition can be a straightforward and detailed vision of what will happen in the future and this is referred to as prophesy, or can take the form of feeling which is generally vague and ambiguous and this is identified as premonition. In any case, science fiction is interested in a very essential question about precognition in that to what extent a predicted future can be changed.

At the other extreme, teleportation seems to be the most controversial among the Psi powers; it is used to mean making objects or persons move from one place to another instantaneously without travelling through space; i.e. making an object or person disintegrate or disappear in one place and a perfect replica appears at the same time in a different place. Teleportation is featured in many science fiction writings and films even though it has received the least account and interest in para-psychological research. In addition, the term Psi powers is sometimes extended to comprise pyrolysis, which means psychic fire-raising, and also the ability to take control of the minds of others which has not been given a jargon term although it is often thought to be possible by means of hypnosis.

In the late 19th century, most of the stories concerned with ESPerception were regarded as occult romances and it was not until the creation of the Society for Psychical Research which made the first attempts to account for such phenomena in scientific terms that this kind of romances was brought close to the science fiction borderline. The first writings include *The Sixth Sense* (1915) by Stephen McKenna, *The Man with Six Senses* (1927) by Muriel Jaeger, and "The Man Who Saw the Future" (1930) and "The Man with X-Ray Eyes" (1933) by Edmond Hamilton. The theme of Psi powers quickly developed during the 1940's and 1950's thanks to the efforts of John W. Campbell, editor of Astounding Science Fiction Magazine, whose early story "Forgetfulness" (1937) offers an image of a future human race that has outgrown its dependence on technology because humans rely on the developed powers of their minds instead of the machine. Campbell was unquestionably the engineer of the "Psi boom" of the 1940's and 1950's which produced highly creative works about the psychic powers. Among the most notable works of the period we may cite Poul Anderson's *Twilight World* (1947), John Windham's *Re-Birth* (1955),

Murray Leinster's "The Psionic Mousetrap" (1955), James Blish's *Jack of Eagles* (1952), and L. Ron Hubbard's early story "The Tramp" (1938) which is about a tramp who has undergone a brain surgery making him develop miraculous powers, and he is finally destroyed being unable to cope with his new situation.

While the previous stories have dealt with the general powers of the mind, others have featured particular mental abilities as in *The Demolished Man* (1953) by Alfred Bester who was the first writer to introduce the variant title of the character as Esper. The *Demolished Man*'s setting is the 24th century in which telepathy is common and it is used to maintain peace and order in society and the story concentrates on how telepaths are used by the police to investigate crimes. Telepathy is also a central focus in Robert Heinlein's *Time for the Stars* (1956) which explores another possibility of using telepaths. In fact, Heinlein's plot is based on building spaceships that go looking for other planets to colonise, and the major concern of the colonisers is to find twins who can communicate with each other telepathically to place one of them on board and keep the other on Earth. Robert Silverberg is another writer who is interested more in the effects of such power on the gifted person in his highly appraised novel *Dying Inside* (1972) which is about a young character who has telepathic powers allowing him to read the minds of others. However, he uses his abilities only for his own convenience until he begins to lose this power on which he has become fully dependent.

Telekinesis constitutes a central focus of certain science fiction stories including Stephen King's *Carrie* (1974) which depicts a teenage girl with telekinetic powers named Carrie who unleashes her frightening ability upon a small New England town leaving it like a warzone and turns even to her fanatically religious mother and kills

her. King's novel was adapted into a film by Brian De Palma in 1976 and was followed by a sequel in 1999 by Katt Shea with a different title *The Rage: Carrie 2*. Another story about telekinesis is Larry Niven's *The Long Arm of Gil Hamilton* (1980) which explores the positive use of telekinetic power by a detective who lost an arm in a space accident and is given a new arm –through organ transplantation- which he discovers is telekinetic. His new arm helps him as a detective to solve a lot of mysteries. In Timothy Zahn's novel *A coming of Age* (1985) , the writer portrays a human society in the future in which children develop extraordinary telekinetic powers –called "teeking abilities" in the novel- which eventually disappear once they reach puberty.

As far as teleportation is concerned, a number of stories feature characters with this power used for various purposes as in *Knight Moves* (1985) by Walter Jone Williams which deals with teleportation by alien creatures. The story is about a rich and powerful man, Doran, who acquires unlimited energy and eternal life in exchange of selling off Earth to a powerful alien being. As human race and civilisation become in danger of extinction, Doran and his group seek to save humanity by having recourse to some creatures of a distant world that have the power to teleport. A recent novel of teleportation is Steven Gould's *Jumper* (1992) which describes the fate of the teenage hero Davey Rice who escapes an abusive household and an alcoholic father. As he runs away he discovers he has the power to jump from one place to another; i.e. to teleport himself. Throughout Davey's journey of exploration of the world of adults with his new ability, he tries to make a life for himself and look for his lost mother, but he also faces danger and has frequently to make rash decisions. A sequel to *Jumper* appeared as *Reflex* (2004) in which Gould makes Davey's wife the protagonist of the story who develops the ability to teleport

like her husband. Gould's *Jumper* is made into a film version of the same title in 2008.

On the other hand, mind control has been a popular theme especially in horror stories as featured in Frank M. Robinson's *The Power* (1956) which depicts a superman with mental abilities so advanced that he can control people's minds and move objects. And as he is worried about being discovered he kills everyone he suspects may be on to him. Similarly, Dan Simmons' *Carrion Comfort* (1989) is the story of a group of "mind vampires" that can subjugate people to their wills and control their minds using their diabolical mental powers. Instead of bloodsucking, the novel presents psychic vampires that can infiltrate minds and lead victims to act violently and even to kill.

In the field of precognition, there is a notable tradition of showing the paradoxes which arise from having knowledge of future events before they take place. In fact, characters whose foresight of the future have often proved perversely impotent and rarely get satisfaction out of their abilities. "Cassandra" (1978) by Carolyn Janice Cherryh, for instance, depicts the gift of predicting future apocalyptic events as a curse since Cassandra, the story's protagonist, can do nothing to stop their happening. However, Philip K. Dick's story "Minority Report" (1956) reverses the tradition and deals with crime prevention through precognition. The story is set in a futuristic New York City where a police agency, called Pre-crime, manages to prevent crimes on the basis of reports delivered by three mutants called "Precogs" who can see future crimes before they happen. The climax of the story occurs when the head of Pre-crime is himself accused of pre-murder and he must prove his

innocence relying on the Precogs' reports. "Minority Report" is adapted to the screen with the same title in 2002 by Steven Spielberg.

Finally, it is important to mention that the psi powers of clairvoyance and fire-raising rarely receive separate treatment in science fiction stories and they usually serve a plot function. A notable example which features clairvoyance as a central focus is *Second Sight* (2005) by Gary Blackwood which goes back to the last days of the American Civil War when a clairvoyant girl has a vision of an assassination plot on President Abraham Lincoln. Likewise, fire-raising is exceptionally depicted as a major theme in Stephen King's *Firestarter* (1980) which is about the eight-year-old girl Charlie McGee who is born with the most destructive power –pyrokinesis or the ability to create fire with the power of the mind- due to her parents who were subject to drug experiments by a government agency called "the Shop" with the result that the father himself develops telepathic powers. The Shop tracks Charlie and her father in order to use them as a weapon of war. Although Charlie does not like her power, she must use it when her father is murdered and she becomes in danger. She eventually sets fire all around incinerating the entire Shop headquarters. Like many successful novels, *Firestarter* was adapted into a film in 1984 by Mark L. Lester and was followed by a sequel titled *Firestarter 2: Rekindled* in 2002 by the same director.

1.2.2.5. Apocalyptic Themes in Science Fiction

One more classic theme that has always played a central role in science fiction and continues to grip the imagination of authors is the end of the world theme which has been treated under a cluster of sub-themes including apocalypse and disaster, and post-apocalypse and survival. The apocalyptic visions, the destruction of the world

and the annihilation of the human race, which have primarily been inspired by religious imagination, can be traced back to the naturalist work of Comte de Buffon *Epochs of Nature* (1778). In this work de Buffon presents the natural world and its history popularising the notion that a series of "worlds" had occupied the Earth going through various natural cycles involving erosion, floods, volcanoes and other natural phenomena. Therefore, the idea to construe "world" as "planet" or "Earth" is not true; apocalypse or the end of the world has never meant the complete destruction and disappearance of the Earth planet. In this respect, cataclysm, natural or manmade, has been portrayed in science fiction as being the product of a wide range of causes including evolutionary changes caused by natural catastrophes, ecological changes which refer to the interference with nature, plague as an agent of holocaust, massive mutation in plants, animals and humans due to the use of nuclear weapons, and nuclear power which has been the most popular agent of holocaust in science fiction since the Second World War.

A convenient starting point in this field was Mary Shelley's story *The Last Man* (1826) which was written before scientific imagination made itself extensively felt in literature. The story is about a plague that crosses Europe from Turkey and Greece killing all populations leaving only one survivor in Rome who is possibly the last man. The protagonist, the Last Man, decides to write his story while sailing in search of other human life. Following Mary Shelly's novel, plagues were to remain one of the standard literary means of depopulating the world and destroying society. Besides, and till the First World War, apocalyptic science fiction stories concentrated mainly on catastrophes and disasters caused by either natural or cosmic factors which became a particular favourite of scientific romance. For instance, Edgar Allan Poe's "The Conversation of Eiros and Charmion" (1859) is an early story which presents

two people after their death discussing the way the world ended. A comet in the solar system approaches the Earth causing biospheric changes as nitrogen disappears from the atmosphere and only oxygen is left. When the comet nucleus hits, the Earth bursts into flames leading to the end of the world. Many other stories followed in a similar vein including Camille Flammarion's *La fin du monde* (1894) (trans. as *Omega: The Last Days of the World* in 1897) which describes the end of the world in the 25th century when a comet collides with the Earth leading to a series of physical and social changes that profoundly affect the planet and its people far into the future. Gabriel Tarde's *Underground Man* (1896) depicts the helplessness of science to prevent the rapid cooling of the Earth which threatens human life on the planet and forces people to seek refuge underground. In "The Star" (1897) by H. G. Wells, a runaway star hotter and brighter than the sun causes impending catastrophe, and in *The Purple Cloud* (1901) by Matthew P. Shiel, a mysterious lethal purple gas annihilates all living creatures except two people: a new Adam and Eve. On the other hand, Jack London depicts the world after a plague depopulated the Earth in 2072 and only few people survive in his story *The Scarlet Plague* (1914).

After the First World War, the apocalyptic vision and the notion of disaster became more common in science fiction revealing the idea that an imminent end of the world is the only possible solution to apostasy and the decadence of modern civilisation. Although man's capacity at the time was rarely seen as efficient and powerful enough to operate and destroy on a global scale, science fiction writers tended to argue through dark apocalyptic scientific romance that modern human beings deserve collapse and annihilation as a result of their failure to preserve the gift of civilisation and their inability to refrain from warfare. After the experience of global war, science fiction writers continued in the same tradition of disaster

emphasising natural catastrophes, cosmic factors or biospheric changes which drastically affect human life and civilisation. Notable examples from that period include Sydney Fowler Wright's *Deluge* (1928) which is one of the most famous of the English disaster novels. The story depicts a flood that destroys modern civilisation in England as a response to the trauma of WWI and the severe consequences of industrialisation. The flood offers a new opportunity for a subsequent attempt to build a new society by the survivors of the deluge. Fowler Wright's next story *Dawn* (1929) is often considered a sequel to Deluge; it carries a much bitter commentary on the corruptions of modern civilisation and a glorification of nature. Robert Cedric Sherriff wrote *The Hopkins Manuscript* (1939) in which he imagines what might happen if the moon crashes into the Earth and the resulting events which lead to cataclysm are described by a retired schoolmaster who lives in a small Hampshire village in England. In addition, P. Anderson Graham shifts for the first time from natural catastrophe to man's responsibility in his story *The Collapse of Homo Sapiens* (1923) which shows Africans and Asians steal atomic secrets and bomb the Anglo-Saxons throwing them back to the Stone Age. In two more impressive works co-written by Philip Wylie and Edwin Balmer *When Worlds Collide* (1933) and *After Worlds Collide* (1934), an astronomer discovers that a pair of runaway planets will come close to the Earth and will cause catastrophic damage. Scientists decide to build spaceships to transport people to one of the planets assumed to have a stable orbit. The second novel follows the fate of the survivors on the new planet after the collision.

It is important to note that such stories of disaster and apocalypse have not been particularly popular in the United States before the Second World War for the American optimistic attitudes and expansionist ideology run counter to the ideology

of disaster and annihilation. Indeed, most of the examples of this type are from the United Kingdom, the fact which may be understood as being related to the UK's decline as a world power throughout the twentieth century after having enjoyed supremacy as a world-wide empire for centuries.

After the Hiroshima bombing, a new period began and the possibility of imminent nuclear holocaust became clear to everyone. In fact, the public imagination had already been invaded by all kind of wild and horrible fancies in reaction to the discoveries made in the 19th century and early 20th century such as radioactivity in uranium by Becquerel in 1896, radium and polonium by the Curies in 1898, the possibility of converting matter into energy according to Einstein's relativity theory in 1905, and the successful splitting of uranium 235 and the possibility of power derived from a chain reaction announced during the Second World War. The outbreak of the Second World War and the Hiroshima blast confirmed and warned of the danger of adapting the new scientific knowledge to military uses which might end human life in minutes, or hours at most. Consequently, there was a resurgence, to an even higher level, of the end of the world theme which stressed a distinctively apocalyptic atmosphere and concentrated on the results of nuclear power in general and radiation in particular. The mood depicted in science fiction stories of the post-war era was darker and gloomier in that the catastrophes were primarily man-made and that humans might easily destroy themselves and their world as weapons became even more sophisticated and powerful. The idea of wholesale destruction and nuclear holocaust gained ground steadily among writers on both sides of the Atlantic, and man was pictured as an agent of racial suicide through nuclear, biological and chemical warfare. In fact, all traditional concepts of courage, heroism and the noble

sacrifice of soldiers became irrelevant as war was dominated by machinery and the logic of combat was dictated by technological considerations.

And with the escalation of the armament race and the intensification of the Cold War, the depth of anxiety was better reflected by satires and black comedies which portray bitterly ironic apocalypses and bleakly nihilistic catastrophes bound to end the human life on Earth. The most notable examples that responded to the deep-seated worries and anxiety of the period include *Shadow on the Hearth* (1950) by Judith Merrill which portrays the terror of nuclear war by exploring its consequences for a typical suburban household rather than capturing the images of the blasts. The family in most parts of the book is occupied with the consequences of the daughter's radiation sickness and the lonely neighbour lady who has also been exposed to this danger. In *The Long Loud Silence* (1952) by Wilson Tucker, a veteran of combat duty on leave from service in the Korean War awakes one day to discover that a nuclear attack has decimated the entire area east of the Mississippi with the effect that one half of the United States is in strife against the pandemically infected other half. In Nevil Shute's *On the Beach* (1957), a nuclear war has destroyed the Northern hemisphere and air currents slowly carry radioactive dust to the far south of the globe, the only part of the planet still habitable. The story ends with the complete extinction of humanity as radiation sickness appears due to the spread of the fallout and the Australian government provides citizens with suicide pills to avoid suffering from the symptoms of radiation poisoning.

A more horrific scenario of the holocaust is narrated by officer X-127 in *Level 7* (1959) written by Mordecai Roshwald. X-127 is assigned the task of commanding the "push buttons" of the nation's nuclear weapons situated four thousand feet

underground in a deep military complex shelter for the military personnel named Level 7. When the nuclear war breaks out, the world is gradually demolished and the dwellers of "Level 7" are completely exterminated. Similarly, in the post-apocalyptic novel of the nuclear age ***Alas, Babylon*** (1959), Pat Frank depicts the aftermath of a nuclear war at a time when the Cold War between America and the Soviet Union was at its height. The war breaks out, nuclear weapons destroy all major cities in the United States including the protagonist's town in Florida, disorder prevails leading to killing, banditry and suicide, and people suffer from radiation poisoning. In the midst of chaos and horrifying conditions, people manage to inure themselves to the new Dark Age which may last centuries before the restoration of civilisation and making the contaminated regions clear. A similar spirit is found in Kurt Vonnegut's *Cat's Cradle* (1963) which focuses on the legacy of modern science that hastens the cataclysmic end of the world. The narrator of the novel John sets out to write a book about the day Hiroshima was bombed, and for his research, he comes into contact with the children of Felix Hoenikker, the Nobel Prize-winning physicist and one of the fathers of the atomic bomb. John learns that Hoenikker is the creator not only of the atomic bomb but also of a substance called ice-nine which was devised to freeze water and solidify the mud allowing soldiers to move easily. At Hoenikker's death, ice-nine is entrusted to his children who use it for their personal advantage. Indeed, on a Caribbean isolated island the dictator, stricken with inoperable cancer, bribes one of Hoenikker's children with a government appointment in exchange for a piece of ice-nine which he uses to commit suicide. Meanwhile, a plane crash on the island takes the dictator's frozen body into the ocean and ultimately all the water of the world turns into ice-nine leading to the destruction of the ecology of the Earth and the extinction of all forms of life on the planet.

Science fiction writers have also been interested in this period of despair and grimly pessimistic reality in other kinds of disaster and they have often chosen other means of destruction than nuclear weapons which extended into the 1960's and the 1970's. The other causes for the sense of imminent and impending doom include plague, pollution, climate change and the destruction of the Earth's ecosphere which appear in such works as George R. Stewart's *Earth Abides* (1949) in which plague causes the collapse of civilisation, offering the idea of destroying the modern human world and rebuilding afresh. *The Day of the Triffids* (1951) by John Wyndham is about a world in which all but a few have been blinded by huge poisonous plants as a result of an unusual meteor shower, and his novel *The Kraken Wakes* (1953) depicts sea-dwelling aliens that melt Earth's icecaps and cause the inundation of the civilised world. In Ward Moore's *Greener than You Think* (1947), grass grows uncontrollably and riotously engulfing Los Angeles as a result of spraying a lawn with untested chemical spray. John Christopher wrote *The World in Winter* (1962) about terrible cold that persists all over the Northern hemisphere with thousands of miles of snow desert leading to a holocaust out of which only a few people could hope to survive. Reflecting an eco-disaster, Thomas M. Disch tells in *The Genocides* (1965) about a world overrun by plants which are seeded by aliens and which grow rapidly draining the Earth resources and causing the extinction of humanity. Brian W. Aldiss, on the other hand, deals in *Greybeard* (1964) with mass infertility and the impending extinction of the human race fifty years after the nuclear explosions in space irradiated the planet. Philip Wylie turns to environmental disasters caused by man's heavy reliance on science and industry to illustrate the end of the world in *The End of the Dream* (1972). The same fate occurs in *The Inferno* (1973) by Fred and Geoffrey Hoyle where cosmic radiation causes a global disaster wiping out nearly all human

life. *The story of Lucifer's Hammer* (1977) by Larry Niven and Jerry Pournelle offers horrifying details of the collision of a comet "the Hammer" with Earth. The Hammer falls breaking up into several smaller comets that strike around the world causing volcanoes, earthquakes and tsunamis with devastating results leading to the crumbling of civilisation and to battles between people for survival. It is believed that "the Hammer" is "the Hammer of God" that punishes humanity for its destructive civilisation. Stephen King's post-apocalyptic novel *The Stand* (1978) provides a different scenario for a massive cataclysm caused by the spread of a man-made biological weapon, a super flu virus, which wipes out most of the human population. The few survivors are engaged in a battle between the forces of good and evil to determine who will rebuild the world.

In addition to the previously mentioned causes of apocalypse, and as the end of the Cold War has soothed the anxieties about the nuclear war, science fiction writers have recently turned to exploring the harm humans can cause to their planet by their reckless scientific experiments and their neglect of the environment. Writers are becoming more concerned with environmental issues which threaten human existence on Earth by portraying settings of global environmental calamities and disasters. The fate of humanity in a future characterised by global warming, bio-warfare, endangered species, and refugees from ecological disasters are all featured in such novels as *Earth* (1990) by David Brin, *Mother of Storms* (1994) by John Barnes, *A Chilling Warmth* (2002) by Jay Kaplan, *Nothing Human* (2003) by Nancy Kress, *Forty Signs of Rain* (2004) by Kim Stanley Robinson, and *World Made by Hand* (2008) by James Howard Kunstler. The latter describes life in a village in Upstate New York after America collapses in 2025 under the combined disasters of

peak oil, global warming, influenza epidemic, and nuclear terrorism. The surviving characters struggle to rebuild a pre-industrial and pre-technological society.

The apocalyptic and post-apocalyptic themes have also been featured in the cinema where many novels have been adapted to the screen depicting settings of cataclysm with either local or global natural or man-made disasters. It is relevant, however, to note that the apocalyptic films can be regarded as a distinct sub-genre of such broader film genres as suspense, thriller, horror, adventure or fantasy. The different films made in this field are classified according to the type of disasters whose final outcome may range from the disruption of human civilisation to the extinction of human life, the destruction of Earth and the annihilation of the entire universe. As far as World War III and other apocalyptic nuclear wars are concerned, the noteworthy movies include *On the Beach* (1959) based on Nevil Shute's novel of the same name and followed by a remake in 2002, *The World, the Flesh and the Devil* (1959) adapted from M. P. Shiel's novel *The Purple Cloud*, *Panic in the Year Zero* (1962) based on Ward Moore's stories "Lot" (1953) and "Lot's Daughter" (1954), *In the Year 2889* (1967) which shares the name with the short story "In the Year 2889" by Jules Verne, *The Day After* (1983), *The Postman* (1997) based on David Brin's novel of the same title, and *The Beach Party at the Threshold of Hell* (2007). A global pandemic or plagues threatening human existence on Earth are featured in such films as *The Last Man on Earth* (1964) adapted from Richard Matheson's novel *I Am Legend* (1954), and two other adaptations of the novel were made as *The Omega Man* in 1971 and *I Am Legend* in 2007. Other plague-based movies include *No Blade of Grass* (1970) as a movie version of Samuel Youd's novel *The Death of Grass*, *Plague* (1978), *28 Days Later* (2002) which spawned its sequel *28 Weeks Later* in 2007, and *Resident Evil: Extinction* (2007).

The end of the world may equally be caused by an astronomic impact such as the collision of meteorites, asteroids or comets with Earth, or a sudden change in the physical constants governing the universe which are depicted in *The Day of the Triffids* (1962) adapted from John Wyndham's novel of the same name, *Night of the Comet* (1984), *Armageddon* (1998) whose screenplay served for M. C. Bolin's novel with the same title, and *Deep Impact* (1998). Ecological and biospheric disasters appear in *The Day the Earth Caught Fire* (1961), *Quintet* (1979), *Waterworld* (1995), and *The Day After Tomorrow* (2004) based on the novel *The Coming Global Superstorm* (1999) by Art Bell and Whitley Strieber. On the other hand, life on Earth is believed to be most likely decimated by alien invasions from other planets, and the idea which was first highlighted by H. G. Wells in *The War of the Worlds* (1898) has gained popularity in the cinema with such films as *The War of the Worlds*'s four adaptations from 1953 to 2005, *Invasion of the Body Snatchers* (1956) based on Jack Finney's novel *The Body Snatchers* (1955), *Mars Attacks* (1996), and *Independence Day* (1996).

1.3. The Origins of Science Fiction

Being so popular and a respectable genre of modern literature, science fiction had not been the product of the twentieth century, it is rather the product of a long history having its origins in ancient writings involving various other genres. In this respect, science fiction has usually been claimed as an impure genre which did not finally take shape until the late 19th century and the beginning of the 20th century with its distinctive elements that had already existed in earlier writings. Taking into account the definition of science fiction proper, the genre requires a consciousness of the scientific thought and outlook and a sense of possible social and technological

change which are undoubtedly its fundamental traits. Accordingly, science fiction critics and writers have constantly tried to locate the generic models that are central to science fiction, and have attempted to trace its origins in earlier works of literature that displayed some form of scientific extrapolation and some elements that have come to be recognised today as typical characteristics of the genre. The controversy over the issue has never been settled and the ideas about the roots of this literary genre differ from one group of critics to another. Critic Darko Suvin states in his study *Victorian Science Fiction in the UK* (1983) that "If ever there was in the history of a literary genre one day when it can be said to have begun, it is May Day 1871 for the UK" (Quoted by Nicholls and Clute 1999: 965). It was the day on which Lord Lytton's *The Coming Race* and George Chesney's *The Battle of Dorking* appeared. The first work is about a race of men physically and psychically far in advance of our own that lives in caves in the centre of the Earth and soon to emerge to destroy human civilisation whereas Chesney's novel is basically a military novel dealing with the horrors of war and the consequent devastation after the invasion of England by Germans. However, Brian W. Aldiss argues in *Billion Year Spree* (1973) that the point of origin of science fiction tradition is Mary Shelley's gothic horror novel *Frankenstein* (1818), and the American science fiction magazine editor Hugo Gernsback believes that science fiction clearly began with the works of H. G. Wells, Jules Verne and Edgar Allan Poe who were the first to practice a coherent literary tradition of science fiction (Stated by Nicholls and Clute 1999: 965).

There is no doubt that a cognitive scientific way of viewing the world did not emerge until the 17th and 18th centuries with the advent of rational philosophies, political revolutions and new scientific inventions which revealed a sense of change in the structures of human society. In addition, it was during the 18th century that the

novel as a modern conventional form of literary expression appeared with Daniel Defoe, Samuel Richardson, Henry Fielding and others. Therefore, it is commonly believed that to describe as science fiction any work produced before the 18th century is logically inappropriate since the label science fiction applies to both what is a novel and what manifests a scientific awareness in the modern sense of the word "science". However, the main elements which eventually became melded into science fiction and which can be located within the literature of scientific imagination predated the age of modern science and include especially the fantastic voyage, utopia and the gothic. In this respect, many other critics and academics have argued that science fiction can trace its roots as far back as the ancient tradition of imaginative fiction of the Greek mythology represented by the second-century Greek-speaking Syrian writer Lucian of Samosata. According to David Pringle in *The Ultimate Encyclopedia of Science Fiction* (1996):

> *Science fiction is a descendant of the type of prose fiction sometimes referred to as Lucianic satire (after Lucian de Samosata, a Greek writer of the 2nd century). Lucianic satire is a kind of fiction which tends to the fantastic… In Lucian's fictions, the ideas discussed were those of classical Greek philosophers, many of whom were exponents of early 'science' (Pringle 1997: 13).*

Two of Lucian's stories are examples of fantastic voyages which are the earliest known fiction about travelling to the moon. The first story *True History* involves a journey to the moon by accident as the protagonist's ship is picked by a typhoon and lifted into the sky to reach the moon, while the second entitled *Icaromenippus* tells the story of a traveller who goes to the moon by the means of wings he designed. The first paragraph of the second work is used by H. G. Wells as an epigraph to his novel *The First Man in the Moon* (1901).

It is worth noting that the kinds of fiction which have exerted more influence on science fiction are the fantastic voyage, especially the lunar voyage, and utopia which appeared frequently in works of the 17th century and later. Although these voyages and utopias have been identified as being the closest kin to modern science fiction and are considered important literary elements that have contributed to the shaping of the genre, they are usually referred to as proto-science fiction in the sense that they lack scientific fidelity in speculation and the methods of travel employed are sometimes absurd and the worlds depicted belong to mere fantasy. The most notable works which deserve particular attention in this field include *New Atlantis* (1627) by the English Francis Bacon, a utopia which outlines an ideal state; *Somnium* (The Dream) (1634) by the German Johannes Kepler; *The Man in the Moone* (1638) by the English Francis Godwin; *Voyages to the Moon and the Sun* (1656) and *Other Worlds: Journey to the Moon* (1657) by the French Cyrano de Bergerac, and *Voyage to the World of Cartesius* (1694) by the French Gabriel Daniel which are all about fantastic voyages in outer space either to the moon or to other indefinite worlds in the universe. Among these writers, Kepler, being also an astronomer, stands as the first who predicated upon the rapidly spreading new philosophy of Copernican astronomy; indeed, his work *Somnium* contains a supplement of 223 notes providing explanations of Galileo's theories which are intended to demonstrate astronomical principles about such a possible journey. Another work that has had considerable influence on modern science fiction is *Gulliver's Travels* (1726) by Jonathan Swift which belongs to travel literature and through which Gulliver narrates his adventures on extraordinary travels that take him to imaginary islands one of which is in space. So most of the works of the 17th and 18th centuries which constituted the first seed of science fiction are journeys to other worlds either imaginary or in space, and these

voyages continued to attract more writers and became commonplace in science fiction stories in later periods.

And as the Industrial Revolution brought new social and economic changes to the Western world with the impact of technology on human lives, fictional conjectures about the future involving science and technology seemed more plausible than ever before. It was the period of intellectual curiosity often described as the dawn of the age of modern science. As a result, the 19th century witnessed the development of new themes and devices in science fiction genre represented first by Mary Shelley's novel *Frankenstein* (1818) in which scientist Victor Frankenstein succeeds to create a monster from the dead bodies of human beings by his researches into the principles of life. Along with Mary Shelley, Edgar Allan Poe emerged as one of the most important figures in science fiction writing in the 19th century with his gothic romances intermingled with a degree of scientific speculation. Poe's most outstanding works which exerted much influence on later science fiction writers include *The Narrative of Arthur Gordon Pym* (1838) about a lost world near the Antarctic to which Jules Verne wrote a sequel called *Le sphinx des glaces* (1897). Poe's other stories which have influenced many notables in the science fiction field especially Verne and Wells are "The Unparalleled Adventures of One Hans Pfall" (1835) about a man who had flown to the moon in a balloon and "Mellonta Tauta" (1850) which deals with another balloon trip to the future, and both stories were believed to have most likely influenced Verne's novels *Five Weeks in a Balloon* (1863) and *Around the World in Eighty Days* (1873). Besides, Poe explored and developed new ideas and new themes that have become landmarks of modern science fiction in such stories as "The Mask of the Red Death" (1842), an apocalyptic tale about a plague that devastated mankind, and "The Conversation of

Eiros and Charmion" (1839) about the destruction of Earth by a comet, a theme which has become standard in 19th century stories of interplanetary travel. Additionally, by the middle of the 19th century and with the new advances in science that swept most of the Western world, a number of American writers in particular began making use of science fiction elements in their work notably Nathaniel Hawthorne and Herman Melville who are to be discussed in the next chapter devoted to American science fiction.

During the second half of the 19TH century, two outstanding figures made their appearance in the realm of imaginative writing and their work had a truly transformative impact on early science fiction. These were Jules Verne and Herbert George Wells who were considered the founding fathers of modern science fiction by establishing a tradition with cultural continuity and commercial success. Without the education of a scientist, Jules Verne excelled in researching realistic and practical scientific details for his books of extraordinary voyages which gained huge popularity throughout the world. Verne wrote about seventy novels and among his most famous are *Five Weeks in a Balloon* (1863), *A Journey to the Centre of the Earth* (1864), *From the Earth to the Moon* (1865), *Around the World in Eighty Days* (1873), and *Twenty-Thousand Leagues Under the Sea* (1870). In the latter, Verne introduced one of his fictional inventions, the elaborate submarine *Nautilus*, which has become a fact. Indeed, the first electric submarine built by two Englishmen in 1886 and the first nuclear-powered submarine made in 1955 were eventually named Nautilus in honour of Verne's vessel. And though Verne believed that his technical inventions were scientifically plausible, his imagination sometimes proves to contradict facts especially in *From the Earth to the Moon* in which a giant cannon shoots the protagonist into orbit, and *A Journey to the Centre of the Earth* which has

been criticised as vulnerable on geological grounds since the expedition goes into the hollow heart of the Earth. Ironically, when H. G. Wells invented the "cavorite", an airship made of a material impervious to gravity, in his novel *The First Man in the Moon* (1901), Jules Verne commented in 1904:

> *We do not proceed in the same manner. It occurs to me that his stories do not repose on very scientific bases… I make use of physics. He invents. I go to the moon in a cannonball discharged from a cannon. He goes to the moon in an airship which he constructs of a metal which does away with the law of gravitation. But show me this metal. Let him produce it (Quoted by Evans 1999: 76).*

Being one of the greatest masters of early science fiction, Verne's most influential novels *Twenty-Thousand Leagues Under the Sea* and *Around the World in Eighty Days* have been adapted to the screen respectively in 1954 and 1957, and the second novel was adapted again in 2004. Besides, a number of Hollywood directors produced films whose scripts have been directly inspired from Verne's work, and these include *Journey to the Centre of the Earth* (1959) by Henry Levin and *Five Weeks in a Balloon* (1962) by Irwin Allen.

On the other hand, H. G. Wells is often credited, along with Verne and Poe, as being the father of science fiction and the representative spokesman of scientific world-view. Wells was a student of science, and though he could not complete the requirements for his degree, his studies in biology and Darwinism served him well in his writing. In fact, during the period of Wells's life (1866-1946) there emerged a coherent body of scientific thought which led to prominent inventions and discoveries in various scientific and technological fields. The most revolutionary scientific achievements of the early twentieth century were the invention of powered flight which made space travel no longer seem an absurdity, and developments in biology which brought about the prospect of improvement of the human race by

means of genetic engineering. Having witnessed the upheavals that characterised the modern Western world, H. G. Wells became the new prophet in his speculative fiction by foreshadowing things to come for the human race, and most of his popular works tend to show a bleak future for humanity. His science fiction novels he called "scientific romances" introduced a number of new themes and devices becoming now classic in science fiction, and these include space travel, the invasion of Earth by aliens, alien intelligence, world wars, and the use of chemical weapons and nuclear power, and the projection of further biological evolution. Wells's most popular "scientific romances" began with *The Time Machine* (1895) involving a machine that travels in time instead of space, followed by *The Island of Dr. Moreau* (1896) which is about a sadistic doctor whose experiments succeed in creating a human/animal hybrid, and which deals with themes of eugenics, the ethics of scientific experimentation, and Darwin's theory of evolution. *The Invisible Man* (1897) tells the story of a brilliant medical student who succeeds in making himself invisible experimenting with a formula that alters the refractive index of objects.

Besides, Wells's most internationally read novel remains *The War of the Worlds* (1898) which was the first science fiction work to describe the invasion of Earth by aliens from Mars, and which fuelled the belief that there was certain form of intelligent extraterrestrial life on other planets. The novel has since become a landmark of modern science fiction and has never stopped being adapted into film versions, radio dramas and television series including Stephen Spielberg's film in 2005 and the latest C. Thomas Howell's version *War of the Worlds 2: The Second Wave* in 2008. In a fascinating forward looking dystopian book *When the Sleeper Wakes* (1899), Wells predicts the greatest changes that would occur in the future through the protagonist Graham who falls into a coma-like sleep that he wakes from

203 years later to discover the new times. By the turn of the century, Wells published *The First Man in the Moon* (1901) about a journey to the moon made by two Englishmen one of whom is the scientist Cavor who designed the spaceship "cavorite" which is supposed to shield off gravity. Once on the moon they discover an extraterrestrial civilisation of insect-like moon creatures that take them in capture. Many other stories of Wells written during the first half of the twentieth century have emphasised his status as one of the leading scientific intellects of the period, and his later novels include more particularly *In the Days of the Comet* (1906) which is about a comet that nearly hits Earth, but its gases cause changes in human behaviour, and *The World Set Free* (1914) in which a physicist manages to split the atom, and this was an anticipation of the subsequent development of atomic bombs. In reality, physicist Leó Szilárd acknowledged that the novel inspired him to theorise the nuclear chain reaction in 1933 leading to the construction of the atomic bomb during WWII. *The Shape of Things to Come* (1933) is another of Wells's science fiction works which speculates on future events for the century following 1933, among which Wells predicts the outbreak of the Second World War. The novel was made into a film in Britain in 1936 and the screenplay was written by Wells himself, and rather prophetically the story begins in 1940 as a world war breaks out.

H. G. Wells was a prolific writer not just of science fiction novels which are the most widely read today and which inspired numerous movie adaptations but also of many other genres including history, socio-political commentary and scientific studies. In fact, mankind's future prospects, which he had always viewed with pessimism with rising militarism and dictatorship, and his passionate concern with society led him to produce prodigious output of non-fiction works on politics and society which tend to show a bleak future for humanity. These works include

Anticipations (1901), *A Modern Utopia* (1905), *An Englishman Looks at the World* (1914), *The War that Will End War* (1914), *Outline of History* (1920), *A Short History of the World* (1922), and *The New World Order* (1939). And in the field of science he wrote *The Science of Life* (1930) in biology, *The Work, Wealth and Happiness of Mankind* (1931) in sociology and economics, *Mathematics for the Million* (1936), and *Science for the Citizen* (1938).

It is worth noting that Wells had many contemporaries who wrote the "scientific romance," and between the publication of Verne's first science fiction novel *Five Weeks in a Balloon* (1863) and the last works of Wells, the genre had been consolidating and expanding with such names as Percy Greg in *Across the Zodiac* (1880), William Morris in *A Plunge into Space* (1890), Edward Bellamy in *Looking Backward 2000-1887* (1888), and Gustavus Pope in *Journey to Mars* (1894). And with the advent of the pulp magazines in the late 1890's, the market for magazine science fiction expanded even more, and this allowed science fiction to find for the first time a truly popular audience. The years before 1926 were considerably rich than ever with authors whose science fiction stories appeared in magazines, and the most prominent figures were Frank Aubrey, Edgar Rice Burroughs, Ray Cummings, Murray Leinster, Edwin Lester Arnold, Arthur Conan Doyle, M. P. Shiel, and S. Fowler Wright.

However, the term science fiction did not come along until the American pulp magazine editor Hugo Gernsback used the word "scientifiction" in April 1926 to describe a Jules Verne, H. G. Wells and E. A. Poe kind of story. Indeed, the first English-language magazine devoted wholly to science fiction was Hugo Gernsback's *Amazing Stories* founded in 1926 which began by reprinting the works of Verne,

Wells and Poe and where many reputations were made in genre science fiction. Gernsback left *Amazing Stories* and founded *Science Wonder Stories* which succeeded to make of science fiction a marketing label among the other genres of literature. Besides, Gernsback introduced the first issue of his second magazine with the declaration: "It is the policy of SWS to publish only such stories that have their basis in scientific laws as we know them, or in the logical deduction of new laws from what we know" (Quoted by Carter 1977: 11). He even announced that he was enlisting a panel of experts to pronounce on the scientific correctness of stories submitted to the magazine (Stated by Carter 1977: 11). And yet the modern term "science fiction" was not widely used in the USA in the 1930's and was hardly used at all in the UK before the 1950's. In the UK, the science fiction magazine tradition appeared only with *Tales of Wonder* published between 1937 and 1942 and *New Worlds* that published only three issues in 1946 and 1947, and in both of them the scientific romance tradition actually flourished with the work of Arthur C. Clarke, John Wyndham, Brian Stableford, and Olaf Stapledon.

Practically, it was in 1937 that the term science fiction came into general use and parlance when John W. Campbell took over the editorship of *Astounding Science Fiction*. It was the period called the Golden Age of science fiction when the genre became mature and the most celebrated writers and specialist forerunners made their debuts by publishing their stories in magazines. The list of writers includes more particularly Isaac Asimov, Alfred Bester, James Blish, Robert Heinlein, A. E. Van Vogt, Frederick Pohl, Lester Del Rey, Ray Cummings, L. Ron Hubbard, Theodore Sturgeon, and Murray Leinster. The wave of science fiction magazine publication continued especially in the United States, and it constituted the basis for the science fiction book-publishing boom during the 1950's and 1960's. Among the most

popular magazines of the period were *Authentic Science Fiction* (1951-1957), *Nebula* (1952-1959), and *Science Fantasy* (1950-1967) in the UK, and *The Magazine of Fantasy and Science Fiction* (1949 to the present), *Galaxy Science Fiction* (1950-1980), *Planet Stories* (1939-1955), *Other Worlds* (1949-1957), and *Fantastic Universe* (1953-1960) in the USA. The gradual shift from magazine to book publication won rapidly genre science fiction a much larger readership than ever before. In fact, by the 1970's science fiction constituted around 10% of all English-language fiction published (Clute and Nicholls 1999: 570), and the movement has continued unabated ever since with concerns in science, technology, politics, society and the future.

Another shift in the writing of modern science fiction was apparent during the 1950's and 1960's when writers began exploring subjects related to soft sciences (politics, sociology and psychology), in addition to their interest in hard sciences (engineering, astronomy and physics). Stories of Psi-powers had gained popularity ever since the first appearance of A. E. Van Vogt's *Slan* (1940) which depicts a race called Slans who are the product of human evolution; they are super-intelligent and have psychic abilities to read minds. And while some science fiction writers extrapolated the future far into outer space with unrealistic space operas, others became more interested in realistic technological future exploring the threats of scientific experimentation and technological progress on humanity. In fact, both science fiction writers and scientists in the early Cold War years responded to the growth of military-industrial Corporation and launched forums for debate about the control of science. The future began to look pretty grim indeed with the impact of technology on people and the environment, and science fiction has been the first to sense the danger that is looming on humanity's horizon. Atomic doom stories began

to appear during the Cold War years, and after the vogue for science fiction films of nuclear catastrophe, writers began expressing cynicism about the scientific enterprise as a whole and their loss of faith in scientific progress. Science has become no longer a revolutionary force of change, but rather a servant of big business and international corporations. Most of the writers involved in this campaign were Americans including more particularly Nevil Shute, Samuel Delany, Philip K. Dick, and J. G. Ballard. Additionally, with the advent of cyberpunk in the 1980's and 1990's, the sense of apocalypse has been intensified making the future even darker for humanity as the machine intelligence would exceed and even merge with human intelligence. This kind of apocalypse began to gain ground steadily in the plots of science fiction films and novels like *The Matrix, Terminator and AI* (Artificial Intelligence) in which dystopian technological events allow machines to take over and cause the total extinction of human life.

Being a worldwide respectable literary genre, science fiction has further been valued and its status has been enhanced with the creation of international foundations and societies that offer various annual awards for the best works of science fiction and fantasy and organise forums and conferences to promote and revitalise the genre in a world characterised by rapid and continuous change in all fields of life. Among the most prestigious awards for science fiction is the *Hugo Award* named after Hugo Gernsback, the founder of the pioneering science fiction magazine *Amazing Stories*, and presented every year since 1955 for different categories of science fiction including the best novel, best novella, best short story, best dramatic presentation, best editor, and best non-fiction book. The award, designed as a rocket mounted on a base, is presented by the World Science Fiction Society (WSFS), and the nominees and winners are chosen by the annual World Science Fiction Convention (Worldcon)

whose most meetings were held in North America (the USA and Canada), and only a few took place in the UK, Germany, Australia, and Japan. The annually held convention involves many activities and events which include discussions, speeches and presentations on a variety of subjects related to science fiction genre, such as scientific discoveries, technology of the future, and philosophical and sociological implications of science fiction works. In addition to the *Hugo Award*, the World Science Fiction Society offers the *John W. Campbell Award* for best new writer, the *Sidewise Award* for best Alternate history, and the *Prometheus Award* for best libertarian science fiction novel.

The other noteworthy science fiction award is the *Nebula Award* presented every year since 1956 by the Science Fiction and Fantasy Writers of America (SFWA) for the best works of science fiction and fantasy published in the United States. The award concerns five categories: novel, novella, novelette, short story, and script for a movie, and its design presents a transparent block on which a glittery spiral nebula is embedded. Besides, there are national awards in different countries such as the *Aurora Award* in Canada, the *Endeavour Award* for works from the Pacific Northwest, the *British Science Fiction Association Award* (BSFA) in the UK, the *Seiun Award* in Japan, and the *Philip K. Dick Award* named after science fiction writer Philip K. Dick and sponsored by the Philadelphia Science Fiction Society created in 1982, the year of the writer's death.

In the field of cinematographic production, the most respected award for science fiction films is the *Saturn Award* offered annually since 1972 by the Academy of Science Fiction, Fantasy, and Horror Films in the USA. The physical award is a design of the planet Saturn surrounded with a ring of film, and it is similar to other

film awards like the Oscars, the Emmys, and the Grammys. The most honoured science fiction films that won the *Saturn Award* are *Star Wars* (1977), *Alien* (1979), *E.T. The Extraterrestrial* (1982), *The Terminator* (1984), *Total Recall* (1989), *Jurassic Park* (1993), *The Matrix* (1999), and *Star Wars Episode III: Revenge of the Sith* (2005).

Conclusion

From its beginnings in the different early genres of imaginative writing to its recent developments, science fiction has succeeded to emerge as a highly popular, distinctive and respectable literary art form. It has always been concerned with the conditions of man's life on Earth, his ability to master his own environment and his role and place in the cosmos. Unlike the other genres of literature, science fiction has tended to emphasise the shifting boundaries between the real and the imaginative, the familiar and the unfamiliar, by exploring the impact of science and technology on human life and values and extrapolating the possible futures of our world. Science fiction's ageing European roots would ultimately find fertile soil in the United States of America where editors such as Hugo Gernsback and John W. Campbell would cultivate it, infuse it with new life and help it grow and find its way to world popularity and success. It was in the United States that science fiction has ultimately flowered into one of the most significant and influential literary genres of the twentieth and twenty-first centuries.

CHAPTER TWO

History of American Science Fiction and its Dominance in the Post-War Era

Introduction

2.1. Science Fiction Before 1926

2.2. The Science Fiction Magazine Era

2.2.1. The Gernsback Era

2.2.2. The Evolutionary Shift in the Campbell Era

2.2.3. The 1950's: The Decade of Transition and Stylistic Experimentation

2.3. The New Wave

2.4. From 1980 to the Present: The Age of Cyberpunk and Space Opera

2.5. Post-War American Science Fiction: Factors of International Dominance

Conclusion

CHAPTER TWO

History of American Science Fiction and its Dominance in the Post-War Era

Introduction

No one can deny that genre science fiction is today of American dominance and that the naming itself is an American act after a British precedent. Although there were anticipatory ideas and comments throughout the nineteenth century in the form of "scientific romance", the first true practice in the field whether in fiction or in criticism belonged to the western side of the Atlantic. It is certainly useful to think of science fiction as a tradition, a developing complex of themes and attitudes wedded to complex cultural and historical circumstances which make it finally develop into a distinct genre. E. A. Poe, Jules Verne and H. G. Wells were the most prominent figures in establishing a sense of the scientific romance as a genre so that later writers in America were able to think of themselves as working in an identifiable tradition. It was actually in America that the tradition of early stories which bear some resemblance, usually thematic, to science fiction was important in the formation of the genre. But modern science fiction, an established recognisable genre of literature as known today, did not come into being until well after these early works were written. American science fiction has its own distinctive history that has placed it at the forefront of the international scene ever since the genre emerged in the pulp magazines and manifestly separated from mainstream literature. The worth of examining American science fiction, its stages of development, and the underlying factors that made it flourish lies in its dominance over all other modes of literary

expression and its status as the most popular, fascinating and potent literary genre from the beginning of the twentieth century to the present.

2.1. Science Fiction Before 1926

Although academic histories of science fiction vary in choosing clear points in time as for the beginning of the genre, there are still parallels between them in the sense that almost every writer embraced in one history still appears in most other histories. The existing histories also mention different points to mark transitions between eras and science fiction historians often offer explanations for their choice. For J. O. Bailey, who published the first academic study of science fiction *Pilgrims Through Space and Time* (1947), the period of significant development of science fiction is between 1817 and 1915 and the era of establishment and recognition is 1915 and after (Stated by Westfahl 1998: 86). Brian Aldiss dismisses science fiction before 1800 in his work *Trillion Year Spree* and considers that the origins and inspirations for science fiction lie within the Industrial Revolution –the early 19th century- with Mary Shelley, and not Poe, as the pioneering figure, and that the synthesis emerged in the modern American pulp magazines with the efforts of Campbell instead of Gernsback (Aldiss 2001: 13-14). Similarly, Darko Suvin chooses 1800 as the key turning point in science fiction history in *Metamorphoses of Science Fiction* (1979), but he chooses H. G. Wells as the producer of the synthesis of the modern genre (Suvin 1979: 219-220). On the other hand, Marjorie Hope Nicolson cites in *Voyages to the Moon* (1948) E. A. Poe as the first writer to bring something new to imaginative fiction in the application of scientific principles to the actual passage between the Earth and the moon. She claims that from this time on, writers of moon voyages attempted to make their planetary flights more plausible and scientifically acceptable (Stated by Westfahl1998: 86-87).

Accordingly, the major era of science fiction in the USA began in the nineteenth century with E. A. Poe who was the first writer to grapple with experiments in science fictional method in his writings. Although Poe is commonly known as a poet, a writer of gothic stories and an originator of the detective story and the horror story, he is also one of the most influential American writers whose work in a wide-ranging scientific experimental fashion contributed immensely in the emergence of modern science fiction and influenced many notables in the science fiction field. As his appreciation of the wonders of science grew, his attempts to find literary means to interpret the aesthetics of scientific discovery and scientific fact became more varied including themes related to astrology, physics, alchemy, and space and time travel. Besides, Poe holds, with Hawthorne, one of the patents on the short story as an artistic mode, and during the first phases of the development of modern science fiction, the short story was an ideal form for the genre.

Among Poe's stories, those most likely to pass muster as science fiction, "MS. Found in a Bottle" (1830) which draws on the existence of a world within a hollow earth and shows Poe's knowledge of the "holes at the poles" idea. The narrator's 'discovery' comes through the whirlpool which serves to introduce him to another reality when the ship sinks, and this account apparently was the message found in the bottle. This story was followed by another in a series of sea tales which contain science fiction elements. It is *The Narrative of Arthur Gordon Pym* (1838), a novel of imaginary sea voyage, shipwreck and strange catastrophe involving marvellous elements such as a black land of death, mystic script graven in the rocks, and the incomplete ending which may suggest the discovery of an inner world similar to the one in "MS. Found in a Bottle". This seemingly unfinished story was completed by

other writers in the science fiction tradition including Jules Verne in *The Sphinx of the Ice Fields* (1897) and H. P. Lovercraft in "At the Mountains of Madness" (1936).

In the field of space travel, "The Unparalleled Adventure of One Hans Pfaall" (1835) is an example of the balloon tales. It relates a journey to the moon which is the great dream of early science fiction and which became the core event of the twentieth century. Verne's *From the Earth to the Moon* (1867) is heavily indebted to "Hans Pfaall", and his *Five Weeks in a Balloon* (1863) and *Around the World in Eighty Days* (1869) owe too much to "The Balloon Hoax" (1844) which describes in minute details the construction and navigation of the first dirigible balloon.

Poe was also concerned with the future and he shows remarkable interest in imaginative speculation. In his story "The Colloquy of Monos and Una" (1841), he manifests his concern with a technologically overwhelmed future; he says, "Meantime huge smoking cities arose innumerable. Green leaves shrank before the hot breath of furnaces. The fair face of nature was deformed as with the ravages of some loathsome disease" (classiclit.about.com). And in a letter he says, "I live continually in a reverie of the future" (Quoted by Aldiss 2001: 46). Another tale that experiments with the theme of time displacement is "Mellonta Tauta" (1849) (the title is Greek for "these things are in the future") which opens directly in a future environment in the year 2848 and sets the marvels and revelations of the future, such as speedy travel by balloon or train, population crisis that makes individual life valueless, and floating telegraph wires, against the old standards and knowledge of the present. In the same vein, "The Thousand-and-Second Tale of Scheherazade" (1845) comes to demonstrate the inaccuracy of past conceptions of the future. In this version of the Arabian Nights, Scheherazade recounts further adventures of Sinbad,

in which he comes up against some marvels of 19th century technology, and which the Sultan fails to understand and considers nonsense. Thus the infuriated Sultan orders her strangled. According to David Ketterer, the story suggests that the facts of the future time may be less credible than the fantasies of the present, and thus the past's sense of the future is inaccurate (Ketterer 1974: 73). Many other stories of Poe can be fully accounted for by the science fiction label for they contain specific elements present in the modern science fiction genre or due to Poe's use of some pseudo-sciences. For instance, "The Conversation of Eiros and Charmion" (1839) belongs to the post-apocalyptic fiction and contains astrological elements. It is a conversation between two dead persons; Eiros died in the apocalypse and he explains to Charmion the circumstances which led to the end of the world. This happened when a comet approached the Earth leading to the loss of nitrogen from the atmosphere, leaving pure oxygen, and this caused the Earth to ignite when the comet nucleus hits. Wells's stories "The Star" (1897) and *In the Days of the Comet* (1906) and Philip Wylie and Edwin Balmer's *When Worlds Collide* (1933) owe too much to Poe's tale, and the topic has become of particular science fiction interest ever since. Sam Moskowitz qualifies Poe's description of the apocalypse by claiming that "Earth had never before been wiped out in fiction in quite this astronomical and scientifically sound fashion" (Moskowitz 1963: 55). "The Mask of the Red Death" (1842) is also apocalyptic; it has humankind devastated by a plague, the Red Death, like in Mary Shelley's *The Last Man* (1826). Poe's use of pseudo-sciences in his tales is manifested more particularly in his interest in mesmerism, a kind of hypnotism, which Poe regarded as a strange but legitimate new science, and which appears in three science fictional tales: "A Tale of the Ragged Mountains" (1844) about the preservation of the life of a man after his apparent death by the mesmeric

powers of Dr. Templeton, “Mesmeric Revelation” (1844) in which a mesmerist narrator questions a dying subject put under mesmeric powers about the after-life, and “The Facts in the Case of M. Valdemar” (1845) which relates how the soul of a dead man cannot leave his body without the release of the mesmeric bond. In “Von Kempelen and his Discovery” (1849), it is alchemy which prevails as Von Kempelen succeeds to transform lead into gold resulting in gold being no more valuable. This tale was a reaction to the Gold Rush of 1849 in America. In addition, the automaton chess-player –called the Turk- invented by Baron Von Kempelen (although it was conceived as a grotesque hoax), inspired Poe to write “Maelzel’s Chess-Player” (1836) which might be linked to the robots of modern science fiction, while “The Man that Was Used Up” (1839) presents a part-human, part-machine being that can be compared to the androids and cyborgs of modern science fiction.

As a poet, Poe wrote “Al Aaraaf” (1829), his longest and complex poem with astronomical setting, which was inspired by astronomer Tycho Brahe’s discovery of the supernova, a stellar explosion that Poe identifies with the star Al Aaraaf. Al Aaraaf is meant in Poe’s poem to foretell disaster and the ultimate destruction of the planet Earth. And while “Ulalume” (1848) indicates Poe’s knowledge of astronomy, “The City in the Sea” (1831) goes into the myths of sunken cities such as Atlantis which have become part of the modern science fiction tradition known as Lost Worlds and Lost Civilisations. Poe’s career culminated in “Eureka” (1848), a poetic essay on the nature of the universe, which he composed earlier as a lecture to explain the physical and metaphysical essence of the universe, its origin, its present, and its destiny. Although the work is more intuitive than based on scientific work to reach conclusions, many of his ideas anticipated discoveries of the twentieth century like his own concept of the Big Bang. The essay is still considered a literary work, but it

firmly indicates Poe's fascination with the wonders of science, and the marriage of science and fiction he achieved in his work was the solid ground on which later writers developed science fiction genre.

Poe's writings were renowned in France more than in the English-speaking world thanks to the efforts of Charles Baudelaire who devoted many years of his career to translating Poe in French. Baudelaire admired Poe's skill and work and he found that he had much in common with him and for this reason he tried to be his French counterpart. In France Poe's works became far more influential, and it is Jules Verne who took up most urgently and most adventurously Poe's ideas to formulate more appropriate narrative frameworks for science fiction. Poe's influence is also manifest in the works of other French and British writers such as Camille Flammarion in *Stories of Infinity* (1872), *Uranie* (1889) and *Omega: The Last Days of the World* (1893), and the British Francis Henry Atkins (known as Frank Aubry) in *A Queen of Atlantis: A Romance of the Caribbean* (1898) and *A Trip to Mars* (1909). In fact, Poe's legacy and his contribution to the emergence and development of science fiction are still being debated more than a century and a half after his death. An early judgement was made by the French Goncourt Brothers in their journal "Journal des Goncourt" in 1856:

> *After reading Edgar Allan Poe, something the critics have not noticed: a new literary world pointing to the literature of the twentieth century. Scientific miracles, fables on the pattern A + B; a clear-sighted, sickly literature … the basis of the novel transferred the heart to the head, from the passion to the idea (Quoted by Aldiss and Wingrove 2001: 40).*

Jules Verne himself acknowledged his debt to Poe, along with the other French writer Herbert Matthey who praised the American as a master and who called him in 1915 "le créateur du roman merveilleux –scientifique" (Quoted by Beaver 1976: 9).

Besides, with the emergence of genre science fiction in the beginning of the twentieth century, James T. Bradey Jr. wrote an editorial in Amazing Stories titled "History of Scientific Fiction" in the May 1930 edition stating:

> *Until the time of Poe, there was no scientific literature of an influential character written, with the exception of a few stories by Bergerac (Voyage to the Sun and Moon) and Swift (Gulliver's Travels). The evolution of the type really begins with stories such as "Scheherazade's Thousand and Second Tale", "Mesmeric Revelation", and "The Balloon Hoax". For fifteen years after Poe there was a little fiction of this kind written. In 1862, however, Jules Verne turned his pen toward the scientific story and published Five Weeks in a Balloon ... In 1885 appeared Wells's The Time Machine. It was Wells who carried on the fiction idea, and purifying its technic paved the way for the numerous writers of the present day. Until this time little had been done since Poe's death in America. After Wells, however, many American writers entered the fiel. At the head of a long list are such names as A. Merritt, Garrett P. Serviss and A. Hyatt Verrill (Quoted by Westfahl 1998: 85).*

Brady's ideas paralleled, in fact, Hugo Gernsback's version of the history of science fiction as he believed that Poe first and then Verne and Wells are the most important progenitors of science fiction. Indeed, Gernsback's very first definition of science fiction was given in the first editorial of Amazing Stories titled "A New Sort of Magazine," he says, "By 'scientifiction' I mean the Jules Verne and Edgar Allan Poe type of story –a charming romance intermingled with scientific fact and prophetic vision" (Quoted by Westfahl 1998: 70). He even clarifies his idea by claiming,

> *Edgar Allan Poe may well be called the father of 'scientifiction'. It was he who really originated the romance, cleverly weaving into and around the story, a scientific thread. Jules Verne, with his amazing romances, also cleverly interwoven with a scientific thread, came next. A little later came H. G. Wells, whose scientifiction stories, like those of his forerunners, have become famous and immortal (Quoted by Westfahl 1998: 70).*

By identifying Poe as the first science fiction writer, Gernsback made the genre an American creation, a tradition that was appropriately acclaimed by both Americans and Europeans and continued and developed in American magazines. Surely, Poe,

Verne, Wells and their contemporaries would not have described their works in the terms of Gernsback and other modern critics, and did not recognise themselves as pioneers in science fiction writing. They were rather writers ahead of their time and "prophets" who anticipated the value of both scientific progress and fiction. Most commentaries and criticism reveal that the genre already existed as the product of individual geniuses and all it lacked was a convenient name and theories.

Despite the emphasis on Poe as a pioneer in the "scientifiction" tradition, he was by no means the only American writer of the 19th century who was accepted as an important contributor to science fiction history. Poe's American contemporary Nathaniel Hawthorne was also intrigued throughout his writing career by themes we would now call science fiction. Many of his works border on science fiction in the sense that characters as doctors, chemists, mesmerists, physicists, and inventors expose their marvellously creative and destructive skills through his fiction. For instance, the main action of *The House of the Seven Gables* (1851) derives from hypnotism and a strange inherited disease; mesmerism as a major topic of 19th century scientific fiction constitutes the major subject in *The Blithedale Romance* (1852), and a scientist's quest for the elixir of life –water from the fountain of youth- is the subject of "Dr. Heidegger's Experiment" (1837). In "The Birthmark" (1843), a scientist obsessed with perfection attempts to remove a birthmark his wife has on her cheek, but the doctor has only one moment of perfection after the mark fades because the wife finally dies. "The Artist of the Beautiful" (1844) describes the creation of an automaton butterfly, a kind of putting spirit into a machine, and in "Rappaccini's Daughter" (1844), a scientist attempts to make his daughter impervious to the evils of the world through experiments involving secret poisons, but he is foiled by his rival, a student of medicine, and the girl finally dies. Although Hawthorne is known

primarily for his work outside the science fiction field and his novels and short stories can be classified as moral romances and psychological allegory, the enduring power of these stories and their influences on subsequent 19th century scientific fiction come from their exploration of the psychology of the new emerging technical-scientific elite in Hawthorne's society in the dawn of the age of modern science.

Other nineteenth-century and early twentieth-century American writers following in Poe's footsteps and experimenting in Vernian and Wellsian traditions include Fitz-James O'Brien in "The Diamond Lens" (1858) and *What Was It? A Mystery* (1859); Ambrose Bierce in "The Damned Thing" (1894) and "Maxon's Master" (1909); Edward Everrett Hale in "The Brick Moon" (1869) and "Hands Off" (1881); Frank R. Stockton in "The Water Devil" (1874), "A Tale of Negative Gravity" (1884), *The Great War Syndicate* (1889) and *The Great Stone of Sardis* (1898); and Garrett P. Serviss in *The Moon Metal* (1900) and *A Columbus of Space* (1909). In fact, the development of late nineteenth-century speculative fiction, which continued through the early decades of the 20th century, was not independent from general fiction that was popular in the dime novels (several forms of juvenile popular fiction starting from the 1860's and considered the antecedent of today's mass-market paperbacks and comic books). Alongside, there was an explosion of new periodicals through the 1880's and 1890's that opened up market space for various types of fiction including adventure, fantasy, detective, western, and scientific romances in the Vernian and Wellsian tradition. So the latter was already popular in magazine format along with the dime novels and then the slicks (more expensive magazines printed on better paper) such as McClure's Magazine. And with the ready availability in the USA of cheap paper made from wood pulp, the pulp magazines appeared and grew rapidly taking up the commercial genres identified by the dime

novels. Both the slicks and pulps were part of a magazine-publishing revolution beginning in the 1880's with massive circulation and the publication of a mixture of fiction, factual articles, and poetry. The first of the pulps was Argosy created in 1882 by Frank A. Munsey who changed its contents in 1896 to contain only fiction with the specialty of adventure stories. As a result, the general-fiction pulp magazines began to give way to specialized genre pulps including among many others Sea Stories (started 1900), Adventure (1910), Detective Story (1915), Western Story (1919), Love Stories (1921), and Weird Tales (1923). The pulps were the first to establish the categories of fiction now tagged crime, western, romance, horror, and fantasy. In the pulp jungle of the late 19th century and the beginning of the 20th century, science fiction was a late-coming part and did not get its own pulp until Hugo Gernsback created Amazing Stories in 1926. Until then, the scientific romance, which was already popular in the UK with such names as George T. Chesney, George Griffith, M. P. Shiel and H. G. Wells, had been a staple of the general-fiction pulps without a distinctive identification and without an awareness of its existence as a special and distinct fiction genre.

Prior to the advent of science fiction as a genre, numerous writers had been identified within the speculative tradition with stories that border on science fiction mostly intermingled with elements of fantasy, adventure, mystery, crime, and horror. The most notable writers in the field include Edward Bellamy in his adventurous works *Dr. Heindenhoff's Process* (1880), "The Blindman's World" (1886), and his best-selling utopia ***Looking Backward 2000-1887*** (1888), Edgar Fawcett in his visionary fantasies ***Solarion*** (1889) and ***The Ghost of Guy Thyrle*** (1895), and Jack London in his Wellsian stories "A Thousand Deaths" (1899) and "The Shadow and the Flesh" (1903) which were followed by his prehistoric fantasy ***Before Adam***

(1906) and apocalyptic fantasy *The Scarlet Plague* (1912). Edgar Rice Burroughs, on the other hand, was a pioneer in the field of extraterrestrial adventure stories with his most influential novel *A Princess of Mars* (1917) and its sequels *The Gods of Mars* (1918) and *The Warlord of Mars* (1919). Burroughs's science fiction stories were inspirational for a number of later well-known science fiction writers such as Ray Bradbury –especially in *The Martian Chronicles* (1950) - Robert Heinlein, H. P. Lovercraft, and also for scientists in the field of space exploration research.

In other science fiction veins came Abraham Merritt who elaborated upon the parallel worlds tradition with his novel *The Moon Pool* (1918), and Gertrude Barrows Bennett, the first major woman writer of fantasy and science fiction in the United States, whose Lost World novel *The Citadel of Fear* (1918) and the futuristic dystopian novel *The Heads of Cerberus* (1919) were highly acclaimed as masterpieces of science fiction genre. An equally important figure in the history of American science fiction is Raymond K. Cummings whose microcosmic stories and space opera contributed widely to the creation of science fiction genre. As he worked, before starting his writing career, as a personal assistant to Thomas Edison, his stories are filled with scientific and technological devices that are classified today among the most important creative inventions and ideas of science fiction authors such as the paralysing ray, the moon dome and gravity assist. His most highly regarded novels include *The Girl in the Golden Atom* (1922) and *Beyond the Stars* (1928). In the interplanetary tradition of Burroughs, Ralph Milne Farley (true name Roger Sherman Hoar) began his writing career publishing in different pulp magazines such as Argosy and Weird Tales and continued in the new specialised science fiction magazines. His major works include *The Radio Man* (1924) and its sequels *The Radio Beasts* (1925) and *The Radio Planet* (1926). In general, most of

these writers dealt in their stories with themes that include galactic empires, superman, and crime fiction packed with a sense of adventure and fantasy with stereotyped characters and weak literary styles based primarily on the descriptive tone since the popular pulp stories of the time were generally written for the least intellectual segment of society. The stories also expose extravagant ideas related to the advancement of science and technology of the age that allowed writers to conduct experiments in speculative fiction either in the past or in the future. They were undeniably these writers who laid the groundwork for the distinctive genre to emerge, and most of them turned with ease into science fiction specialists during the science fiction pulp magazine era.

2.2. The Science Fiction Magazine Era

In the four decades dominated by the science fiction magazines, the genre took shape, grew and evolved from the Gernsback founding era to the stylistic sophistication of the 1950's. In the history of the evolution and development of the genre, the science fiction magazine era can be divided into three major periods.

2.2.1. The Gernsback Era

The high point of American literature and its culture in general was when the genre science fiction got started in the American pulp magazine industry with its icon Hugo Gernsback who founded the first English-language magazine entirely devoted to science fiction. Hugo Gernsback, a Luxembourg-born writer, editor and electrical engineer who immigrated to the United States in 1904, founded a publishing empire embracing every aspect of new technology and more particularly innovations in electrical engineering. In 1908, he launched his first magazine Modern Electrics devoted to electricity and radio followed by Electric Experimenter in 1914 which

changed into the more broadly envisioned Science and Invention in 1920. Throughout his experience with the scientific magazines, Gernsback showed great interest in science fiction as a vehicle of prediction, extrapolation and speculative experiments involving actual or projected scientific phenomena. He was a great admirer of Burroughs and Abraham Merritt as he was of Poe, Verne, and Wells, and he wrote in his magazines a series of scientific adventures of the character Baron Munchausen including "Munchausen on the Moon" (1915), "Thought Transmission on Mars" (1916), and "Martian Atmosphere Plants" (1917) in addition to his novel *Ralph 124C 41+: A Romance of the Year 2660* (1911). All his stories were of little success compared to his career as a magazine editor and his scientific contributions in electronics and communications for which he held 80 patents by the time he died. Gernsback's professional involvement with science fiction appeared first when he devoted the whole August 1923 issue of Science and Invention to science fiction stories, and this was an anticipation of his later commitment to the genre. Indeed, Gernsback proposed to publish a science-fiction magazine in 1924 to be called "Scientifiction", but it was not until April 1926 that he finally published Amazing Stories that announced the existence of science fiction as a distinct literary species. The magazine was an immediate commercial success and it was soon followed by Amazing Stories Annual and Amazing Stories Quarterly in 1927. In his Amazing magazines, Gernsback attempted, not only to identify the fictional contents of stories of scientific speculation, but also to define the genre, to educate readers and new writers through articles popularising scientific ideas, and to convert them to the habit of thinking about the future. Although Gernsback's company was forced into bankruptcy leading to the loss of his Amazing magazines in 1929, he immediately started another science-fiction chain of four magazines: Air Wonder Stories, Science

Wonder Stories, Science Wonder Quarterly, and Scientific Detective Monthly which were later merged into Wonder Stories. However, his empire declined through the 1930's after selling Wonder Stories in 1936; the fact which raised many suspicions and questions around his business activities. In spite of all difficulties, Gernsback created many other magazines and journals in different fields, but his last science fiction magazine, Science Fiction Plus, published in 1953 ran for only seven issues due to the hard competition in the science fiction magazine market.

When Gernsback introduced Amazing Stories, he started with serialised reprints of stories by Jules Verne, E. A. Poe and H. G. Wells whom he put forth as models of the new-born genre, and not only did he advise readers to write likewise but also tried to teach and cultivate a new generation of writers how to write science fiction true to his own vision. In the first issue of Amazing Stories, Gernsback's editorial called for examples of "the Jules Verne, H. G. Wells and E. A. Poe type of story –a charming romance intermingled with scientific fact and prophetic vision" (Quoted by Westfahl 1998: 70). In doing so, Gernsback recognised the expanding awareness of the importance of scientific progress and the necessity of writing fiction on that subject. He argued in an editorial in Science Wonder Stories in 1929,

> *Science-mechanics-the technical arts- they surround us on every hand, nay, enter deeply into our very lives. The telephone, radio, talking motion pictures, television, X-rays, Radium, super-aircraft and dozens of others claim our constant attention. We live and breathe day by day in a science saturated atmosphere. The wonders of modern science no longer amaze us –we accept each new discovery as a matter of course … No wonder, then, that anybody who has any imagination at all clamours for fiction of the Jules Verne and H. G. Wells type (Quoted by Westfahl 1998: 75-76).*

In fact, Gernsback's model fiction was claimed to offer readers the traditional pleasures of popular fiction formulated under the headings of adventure, mystery and fantasy which all should be built on speculative scientific grounds.

While waiting for original stories from new science fiction specialists, Gernsback filled his early monthly issues with reprints of past and contemporary writers including –in addition to Poe, Verne, and Wells- Murray Leinster, A. Merritt, Garrett P. Serviss, and Edgar Rice Burroughs. Original science fiction stories began to appear in greater quantity in 1928 when Miles J. Breuer, David H. Keller, and Jack Williamson published their first stories in Amazing Stories. Besides, the genre got more popularity with the spectacular advent of space opera –modeled on the British scientific romances of Wells and Chesney- when Philip Francis Nowlan's "Armageddon 2419 AD" (1928) appeared. It was immediately followed by the serialised novels of Edward Elmer "Doc" Smith: the Skylark series which include *The Skylark of Spac*e (1928) and *Skylark Three* (1930) and the Lensman series, Edmond Hamilton's "The Universe Wreckers" (1930), and Jack Williamson's *The Green Girl* (1930).

Many of the contributors to the early science fiction magazines were experienced pulp writers who belonged to the different variations of popular fiction - detective, western, adventure, fantasy- and were not specialists in scientific speculation. And while following Gernsback's instructions and recommendations, they attempted to supply the new market with a new variation that concentrated on scientific accuracy and introduced scientific devices although many attempts actually revealed literary weaknesses. In fact, many stories in the science fiction magazines revolved around a conflict between humans and aliens or a struggle against environmental forces on earth or of outer space, involving scientific means and devices but neglecting the literary quality of story-telling. Brian Attebery, in his study of the magazine era, argues:

> *The kind of fiction published in the magazines revealed its popular science and formula fiction parentage more obviously than its literary sources. Characterization was perfunctory and plots were often thinly disguised westerns, mysteries, or lost-world romances (Attebery 2003: 34).*

He insists that

> *Within the pulp science fiction magazines, so long as a story invoked images of futuristic machines or mist-shrouded towers, the writer was free to violate most conventions regarding character and plot… Most of the fiction was stylistically weak, awkwardly constructed and marked by a naïve attitude towards its gadgets and settings (Attebery 2003: 34).*

For all these literary deficiencies, Gernsback was blamed by critics whose opinions on the beneficence of his influence on genre science fiction were quite varied. While Brian Aldiss said of his emphasis on supposed scientific accuracy that it had "the effect of introducing a deadening literalism" into the field (Aldiss & Wingrove 2001: 186), John Clute affirms that "Hugo Gernsback gave the genre a local habitation and a name, but he bestowed upon his creation a provincial dogmatism and an illiteracy that bedevilled US science fiction for years" (Clute & Nicholls 1999: 491). Additionally, Everett Bleiler evokes Gernsback's position in science fiction history and states that his business practices were "impeding the growth of a literary subform" and that "science fiction was in the air at the time, and if Gernsback hadn't set up an opening, someone else would have, since the pulp trend was toward more specialized magazines" (Bleiler 1998: 145). Gary Westfahl, on the other hand, goes even further by bringing together both Gernsback and John Campbell, who came after him, and questions their literary merits:

> *Campbell and Gernsback had no background in literary criticism and approached this activity with only a naïve and simplistic understanding of literary concepts; they did not write polished essays setting forth their theories in an organized fashion, but rather let their ideas dribble out in scattered editorials, articles, introductions, and responses to readers' letters… they were generally horrible prose stylists (Westfahl 1998: 2).*

In spite of these critical attacks, Gernsback was in parallel highly praised and considered by many science fiction scholars and critics for starting the genre, giving it shape, and nurturing a widespread awareness of its existence and importance. Although there was a literary tradition prior to Gernsback which was widely acknowledged and known as the scientific romance in Britain and that became a standard expression during Wells' s time, the idea had not been defended and developed by its representatives as having a special status different from any other genre. It was that awareness of the existence of a large body of related works in the field and the setting of rational theories to identify them that had been lacking before Gernsback's breakthrough. Even the descriptions of the works and the comments made on authors and their techniques had never suggested a specific approach to science fiction as a genre. This approach began eventually with Gernsback who launched the idea with a set of arguments and theories that apply only to science fiction, and who provided a theory of the genre's definition, purposes, and origins; a genre that provides entertainment, education and scientific ideas. Gary Westfahl, who criticised Gernsback on literary grounds, was among the numerous critics who recognised his importance in science fiction history as the first to analyse the genre and to offer comments from which key words emerged and modern science fiction criticism developed. He claims that "without understanding Gernsback's and Campbell's contributions, one cannot understand science fiction or its critical tradition" (Westfahl 1998: 2), and he also argues that

> *I would still maintain that the idea of the scientific romance, as it is seen between 1890 and 1920, was one that was far from universally accepted, weakly developed, and fatally incomplete. Thus, the scientific romance is not really equivalent to the full emergence of science fiction as a genre that was effected by Gernsback (Westfahl 1998: 25).*

And in *Scientific Romance in Britain* (1985), Brian Stableford notes that the tradition of scientific romance eventually died out even in Britain and was replaced by the American idea of science fiction (Stableford 1985: 87).

Gernsback's contributions to science fiction theory were huge and undeniable and began by offering education in scientific principles and facts to the young and by providing stimulating ideas for both inventions and writing fiction. Gernsback's ideas had an immediate impact on writers and readers alike; writers started to include more accurate scientific data in their stories, and readers responded eagerly with letters praising and analysing stories of this type. Readers began to discuss Gernsback's ideas, criticise and expand them in editorials, letter columns, and through informal contacts which allowed the creation of fan clubs. Indeed, by introducing a letters column, which became thereafter a feature of all science fiction magazines, Gernsback published names and addresses so the fans could write to each other and league together in local clubs. And through the readers' letters, Gernsback established in 1934 a correspondence club for fans called The Science Fiction League, the first fannish organisation which came to be known within the community as "Fandom" representing a distinct subculture with its own traditions and jargon. Through discussions, commentaries, and correspondences, science fiction fans could analyse any science fiction story that appeared in print and could give their opinions and criticism with a proper rating. The fans formed themselves into groups or clubs, issued their own amateur magazines or as they were called "fanzines", and many writers and editors in the field later rose from their ranks. Many professional science fiction authors and critics –Damon Knight, Sam Moskowitz, Frederik Pohl, Raymond Palmer, and Jack Williamson- started their interest in science fiction as fans who were trained and taught through editorials and letters' columns the special

requirements of the genre. As part of his efforts in this field, Gernsback announced in 1929, "For the guidance of new authors, we have prepared a pamphlet entitled 'Suggestions for Authors'" (Quoted by Westfahl 1998: 78), and in a letter response in *Science Wonder Stories* in 1930, he affirmed,

> *Science fiction is in its infancy, and the publishers of this, and our sister magazines, spend hundreds, perhaps thousands of dollars in advertising for science fiction writers, advising them, often teaching them the finer points and sometimes the fundamentals of their craft (Quoted by Westfahl 1998: 78).*

By doing so, Gernsback provided a stimulating and supportive atmosphere for the nascent genre and made it possible to believe in science fiction; and that belief, despite a lack of literary training, would be carried on by various writers, editors, and fans who enabled his idea of a genre to grow and endure. Many later critics have eventually acknowledged and recognised the influence of Gernsback and his great contribution in the field. James Gunn notes in *Alternate Worlds*, "Before Hugo Gernsback, there were science fiction stories. After Gernsback, there was a science fiction genre" (Gunn 1975: 113). David Hartwell proclaims that Gernsback's Amazing Stories represents the true beginning of the genre; he says that Gernsback "invented modern science fiction in April 1926… and the history of the world of science fiction dates from the birth of conscious separateness, April 1926" (Hartwell 1996: 23, 118). And the strongest support for Gernsback's role in creating the genre and its critical tradition came from Gary Westfahl and R. D. Mullen in an article entitled "An Exchange: Hugo Gernsback and His Impact on Modern SF":

> *What I have claimed is that Gernsback originated the idea of science fiction: that he uniquely realized that various past and present works were in fact part of a single genre, that he named that genre, described its nature, purposes, and history, and persuaded the world to accept the existence of that genre and to accept the unifying principles he located in its works. And it is for those accomplishments, not any innovative qualities in the stories he published, that Gernsback should be celebrated as the founder of science fiction (Westfahl and Mullen 1994: 273).*

In addition, the artistic illustrations in the science fiction magazines of the period generally matched the fiction. Artists such as Frank R. Paul translated writers' stories into images that are still being used to represent the future, technological inventions, and imaginative creatures. Such images as various kinds of spaceships, domed cities, sophisticated weapons, goggle-eyed creatures, and superman feature on the covers and inside the magazines, and constitute alongside scientific articles and advertising a continuous flow of information that served the genre science fiction to grow and develop.

After the extraordinary success of the Amazing Stories and other Gernsback's science fiction magazines formula, other publishers and editors began creating their own science fiction magazines, and the latter's titles indicated their indebtedness to the Amazing Stories formula: Astounding Stories (1930), Astonishing Stories (1931), Marvel Science Stories (1938), and Startling Stories (1939). And while many responded to and built upon Gernsback's ideas with various degrees of success, his major successor who improved and expanded his concepts and became a second dominant influence on the genre was John W. Campbell.

2.2.2. The Evolutionary Shift in the Campbell Era

Modern science fiction would not be what it became, after Gernsback, without John Campbell and Astounding Science Fiction magazine. John Campbell contributed with his powerful intellect and polymathic talents to the elevation of the science fiction genre to its Golden Age and to making magazine science fiction a literary force. Holding a degree in physics, Campbell was a devotee of the science fiction magazines from their inception, and he began writing science fiction stories while still a teenager. Campbell's first story, "When the Atom Failed", was published

in 1930 in Amazing Stories, followed by "Invaders from the Infinite" in 1932. He rapidly made his name and built a reputation as E. E. Smith's chief rival in writing galactic epics of superscience and showing interest in complex machines. In 1934 he became closely identified with Astounding Stories where most of his stories appeared under the pseudonym Don A. Stuart, and these include "Twilight" (1934); the Machine series: "The Machine", "The Invaders", and "Rebellion" in 1935; and "The Mightiest Machine" (1934). The climax of his popularity came with "Who Goes There?" (1938), a story about an Antarctic research station menaced by a shape-changing alien invader. The story was filmed as *The Thing From Another World* in 1951 and as *The Thing* in 1982, and it marked the end of Campbell's writing career and the beginning of a more influential one in the history of science fiction as editor of Astounding Stories. While writing no more fiction, much of his interest and energy became focused in his editorials and articles which reveal his intellectual flavour especially his right-wing political stance and his flirting with various kinds of pseudo-science such as his strong belief in the incredible forces of ESP and Ron Hubbard's Dianetics that continued to dog him all his life.

Campbell took over Astounding Stories in 1937 at the age of twenty-seven and would retain the post of editor until his death in 1971. In 1938 he retitled the magazine Astounding Science Fiction and he soon proved himself a good and ambitious editor who brought to the science fiction world the fertility of ideas essential to the evolution of the genre, along with a determination to raise the standards of writing and thinking in magazine science fiction. Indeed, the period that began with his editorship extending to the late 1940's is often referred to as the Golden Age of science fiction when Astounding Science Fiction dominated the genre market in a way no other magazine before or after could challenge. Although the new

editor was confronted by new competition in the magazine market including Marvel Science Stories (started 1938), Startling Stories (1939), Astonishing Stories (1931), Super-Science Stories (1940), Fantastic Adventures (1939) and many others, he largely succeeded to discover and to gather the best-known writers in the field who first appeared in his magazine. Such writers as Isaac Asimov, Robert Heinlein, Theodore Sturgeon, A. E. van Vogt, Clifford Simak, L. Ron Hubbard, and others were at the core of Campbell's Golden Age of science fiction, and they all acknowledged the profound influence Campbell had on their careers and their works which have become classics of modern science fiction. Not only did Campbell build on Gernsback's inventions and his magazine standard format, but he also encouraged his authors to think much harder about what they were trying to write, to explore every possible idea working on logic, and to write about the future as if they were addressing an audience living in that future. The result was that Astounding Science Fiction writers became able to express Campbell's vision of the universe and the place of the scientifically minded man within it, and they were even willing to remake themselves to meet Campbell's expectations.

The beginning of Campbell's Golden Age of science fiction can be pinpointed as the summer of 1939 when a number of notable writers published their first stories in Astounding. The July issue of the magazine contained van Vogt's "Black Destroyer" and Isaac Asimov's "Trends", the August issue had Robert Heinlein's début "Life-Line", and in the September issue Theodore Sturgeon's story "Ether Breather" appeared. From 1940 the number of prolific and imaginative writers continued to increase giving Astounding its remarkable domination of the genre science fiction field and providing new dimensions to scientific speculation. However, Campbell's favourite writers he discovered and cultivated and who became the glory of the

magazine were the big three: Isaac Asimov, Robert Heinlein, and A. E. van Vogt. Like many others, Isaac Asimov was Campbell's protégé who brought intelligence and knowledge to his storytelling, and his major innovation was the application of experimental method and scientific principles not only to physical problems but to fundamental questions about society. This application is found in his Foundation stories written between 1942 and 1949, collected as *Foundation* (1951), *Foundation and Empire* (1952), and *Second Foundation* (1953), and which depict the scientist Hari Seldon as the creator of a scholarly society established to prevent a future Dark Age. Asimov's innovation "Psychohistory" allows predicting the fall of a galactic empire, and the faith in this predictive social science led many other writers to consider social dynamics more seriously and to write stories that emphasised politics, psychology, and religion and that gave science fiction a richer form than in its earlier decades. Above all, Asimov's Foundation series came as a reaction against the space opera tradition based on the super-science adventures represented mainly by E. E. "Doc" Smith. Unlike Smith's interstellar stories filled with monstrous aliens and superheroes, Asimov's cosmos is populated entirely by humans who spread out from Earth to occupy millions of worlds in our galaxy, and their motto is, in Asimov's words, "violence is the last refuge of the incompetent" (Quoted by Aldiss and Wingrove 2001: 236). Simultaneously, Asimov distinguished himself during the forties by liberating the robot from the Frankenstein stigma, and he wrote a series of stories collected as *I, Robot* (1950) in which robots appear as indistinguishable from humans thanks to the development of the "positronic brain" which serves as the central computer for a robot. In the same field and with Campbell's aid, Asimov formulated "The Three Laws of Robotics" which prevent robots from harming men.

These laws became the cornerstone of contemporary science fiction and they are included in Asimov's story "Runaround" (1942).

The other key figure in the 1940's is Robert Heinlein whose efforts as a master of engineering fiction helped transform science fiction into a more sophisticated genre. According to Peter Nicholls, "His stories alone would have made the magazine notable" (Nicholls and Clute 1999: 64) with a great number of stories published only in 1940 and 1941 including "Requiem", "If This Goes On", "The Roads Must Roll", "Coventry", "Blowups Happen", "Logic of Empire", "Universe", "Solution Unsatisfactory", "By His Bootstraps", "Common Sense", and *Sixth Column*. Heinlein's studies in physics and his service as a naval engineer helped showing himself a reflective thinker on the effects of technology unfolded in the future. In 1941 he revealed his scheme for Future History in such stories as "Requiem" and "If This Goes On" which outlined the period from 1940 to 2125 reporting many technological advances and sketching various periods of history. Although Heinlein was the first American writer to formalise the concept of "Future History", Isaac Asimov came to expand it into his complex narrative framework in the Foundation series by which he became even more successful that Heinlein abandoned his plan after 1950. Besides, with the advent of nuclear physics in the 1930's which unlocked all secrets of the universe, stories about atomic power swept science fiction magazines, and Heinlein's story "Blowups Happen" (1940) was among the first to recount up-to-date theory and to extrapolate to the first of the atomic power plants. In parallel, Heinlein's skills far outshone those of most of his contemporaries –though not the finest in strictly literary terms- as he incorporated the necessary science fiction technical details with a sense that the world described was real without long descriptive passages. More important, Heinlein set the pattern for

the Astounding hero: the tough competent engineer who uses reason and logic to solve the most insurmountable problems as shown in "The Roads Must Roll" (1940). Throughout his career, Heinlein's most enduring success rests on a realistic understanding of man's place in the cosmos and the philosophical question of coping with the rational laws of the universe.

In addition to Asimov and Heinlein, Alfred Elton van Vogt was equally an eminent figure and one of the creators of Golden Age science fiction with a flood of works in Astounding Science Fiction magazine starting with his first story "Black Destroyer" in 1939. Van Vogt's science fiction assured him the high reputation as a master of intricate, complex and metaphysical interstellar stories postulated by Asimov in his Foundation series. In such stories as *The Weapon Shops of Isher* (1941-2), *The Voyage of the Space Beagle* (1939-43), and *The Empire of the Atom* (1946-7), there is a mixture of hard science fiction, mystery, and transcendent superheroes with much complexity. In fact, rather than writing the rigorously logical stories of the sort of Asimov's and Heinlein's, he directed his skills to Psionic fiction with psychic superheroes that Campbell himself considered to be scientifically valid as any speculation about alien environment and rocketship engineering. Thus, in his attempt to apply scientific principles to the workings of the human mind, he called for the various forms of extrasensory perception (Psi powers) and produced dream-like narratives such as his novel *Slan* (1940) whose protagonist, unlike Heinlein's engineers, is endowed with powers including ESP, physical superiority, and extraordinary intelligence to help mankind out of its difficulties. The other more complex work of van Vogt and which appeared as confusing within the science fiction circle of the period is *The World of Null –A* (1945) and its sequel *The Pawns of Null –A* (1948-9). Null –A is claimed to be a form of non-Aristotelian logic based

on the theories of General Semantics, and which highlights the superior mental control of humans. Due to their complexities, critic Brian Aldiss notes that, "The Null –A serials were colourful, confusing, fast-moving, and appeared to be saying something profound –no one has yet discovered what" (Aldiss and Wingrove 2001: 239). By the end of the 1940's, van Vogt lapsed into silence with his conversion to Hubbard's Dianetics that matched well his ideas.

Unlike many editors, Campbell cultivated and nurtured many other new and even old writers who gathered around Astounding Science Fiction and soon became famous and part of Campbell's stable. Among those who are still associated with the glory days of science fiction in the 1940's is Lafayette Ronald Hubbard who is better known for starting up a psychological theory called Dianetics and then a religion called Scientology which believes in the human mind's powers. The theme dominated Hubbard's fiction as in "The Dangerous Dimension" (1938), *Slaves of Sleep* (1939), and *Paranoid Fear* (1940), although he produced some galactic stories notably The Conquest of Space series. Jack Williamson, who started out with Gernsback in space opera tradition, got wiser under Campbell's guidance and earned a PhD for a dissertation on H. G. Wells. His most famous story published in Astounding is "With Folded Hands" (1947) that treats the theme of robots coming from another star system to serve and protect mankind. Another favourite of Campbell was Catherine L. Moore who often wrote jointly with her husband Henry Kuttner as Lewis Padgett, and who brought to the Astounding magazine the literary qualities of mainstream literature Campbell was looking for. Her refined writing and sophisticated characterisation can be found in her masterpiece "Vintage Season" (1944) and in "Clash by Night" (1943) and its sequel *Fury* (1947). In short, many other writers built their names and started their careers in Astounding Science Fiction

with the aid and instructions of Campbell, and the list includes Tom Godwin, Theodore Sturgeon, Lester Del Rey, L. Spargue De Camp, Harry Harrison, Henry Kuttner, and Frank Herbert. And since Campbell insisted on prose that depicts credible futures with scientific plausibility and since his own special field was atomic physics, many authors followed his way and speculated in their works on the expansion of technology and its unfolded effects. The biggest revelation came in the March 1944 issue of Astounding with Cleve Cartmill's story "Deadline". By assembling facts which were known at the time in the field of nuclear physics, Cartmill wrote the story which exactly detailed the making of the atomic bomb, and what he did not know was the existence of the Manhattan Project with its lines of research identical with the one described in the story. Military Intelligence agents descended on Campbell's office to investigate the background to the story; they demanded to know the source that was leaking the secrets of the Manhattan Project, and they ordered to shut down further articles and stories on the subject. The incident was a proof that science fiction was not just the field of fantastic tales, but it seriously predicted the coming of nuclear weaponry. The widely spread incident also brought about other themes related to scientific research, such as the industrialisation of science, the rise of the industrial spy, and the paranoia of high-funded laboratories as in Hal Clement's "Fireproof" (1949).

Like Amazing Stories, Campbell's magazine ran a letters column that provided the correspondents' addresses so that fans could write to each other and organise in fandoms and local clubs that were unified in 1953 in the World Science Fiction Convention that gives the Hugo Award for best science fiction stories and novels every year. Prior to the creation of the World Science Fiction Convention, another group of fan clubs evolved and came together in 1937 to form the Futurians that

gathered many of the most important writers and science fiction critics in the next generation including Isaac Asimov, Frederik Pohl, James Blish, Damon Knight, and Judith Merril. The Futurians were a major force in the development of science fiction writing and fostered a sense that fans could help shape the genre. Moreover, Campbell added another department called "Readers' Corner" in which scientific plausibility was the main issue. Indeed, there were many readers who demonstrated considerable understanding of the genre and its possibilities, and their discussions and commentaries and their willingness to explore new fictional directions laid the foundations for the creation of a critical theory devoted specifically to science fiction. Many of those fans became important contributors of stories as well as opinions including notably the British John Wyndham and Miles J. Breuer. The Latter complained in a letter that "Poor literary craftsmanship did more harm to the genre than scientific accuracy could compensate for" (Quoted by Ashley 2000: 57). The magazine furthered the education of its readers with another department of science-fact articles written by professional scientists and engineers who were also adept in writing fiction. Every scientist contributed in his own specialty: Isaac Asimov, a biochemist, wrote articles on biochemistry, collected later in his *Biographical Encyclopedia of Science and Technology* (1964-1972); L. Spargue De Camp, a mechanical engineer, wrote on engineering; Willy Ley, a rocket scientist who fled from Nazi Germany, did articles on rocketry (he wrote fiction as Robert Willey and became science editor at Galaxy Science Fiction when it was founded in 1950); and Robert S. Richardson of the Mount Wilson Observatory did astronomy and he wrote fiction as Philip Latham (Stover 2002: 100-1). Campbell himself contributed in scientific journalism and his articles showed his interest in various scientific fields such as electronics, nuclear physics, astronomy, and computers.

Alongside fiction, scientific articles, letters from readers and advertising, Campbell introduced a new department called "The Analytical Laboratory." Every month regular readers participated in ranking the stories in each issue while Campbell would do the statistical analysis. In fact, Campbell's editorial policy in giving too much importance to the readers' response helped him leading the magazine in its right direction as well as in the direction he desired. In this respect, science fiction critic Leon Stover remarks,

> *In striving to remake science fiction in his own image, he made a successful business of it, giving his magazine unprecedented prestige and respectability. Alone of all magazine editors in all fields, he held total control over his creature… His mission was everything, which he took on with a patient regard for his writers and readers alike: they would in time see things his way out of respect for his powerful intellect and editorial skills (Stover 2002: 106).*

Astounding Science Fiction remained popular and commercially successful until the late 1940's in spite of the existence of a great number of magazines in the field which also contributed to the growth of the genre. However, the period of Astounding Science Fiction's dominance ended abruptly with the appearance of The Magazine of Fantasy and Science Fiction in 1949 and Galaxy Science Fiction in 1950. In fact, with Hubbard launching his pseudo-science Dianetics in the May 1950 issue, Campbell's editorials absorbed much of his energy adopting and defending the validity of Hubbard's ideas motivated by his growing wish to see the ideas of science fiction made real. By this time, several of his central writers left the stable, and the exciting new authors of the 1950's made their mark elsewhere. Nevertheless, Campbell's devout leadership proved instrumental in the evolutionary shift of science fiction genre, and his Astounding Science Fiction was the most influential magazine of the 1940's that thirty-two of the thirty-five stories reprinted in the first major science fiction anthology, Raymond Heal and J. Francis McComas's

Adventures in Time and Space (1946), had first appeared on its pages (Attebery 2003: 41). Isaac Asimov, one of Astounding's prominent writers, said of Campbell's influence on the field in an article published in Astounding and titled "The Father of Science Fiction":

> *By his own example and by his instruction and by his undeviating and persisting insistence, he forced first Astounding and then all science fiction into his mold. He abandoned the earlier orientation of the field. He demolished the stock characters who had filled it, eradicated the penny-dreadful plots… He demanded that science fiction-writers understand science and understand people, a hard requirement that many of the established writers of the 1930's could not meet (http://en.wikipedia.org/wiki/john w.campbell).*

James Gunn also states in his chronicle of science fiction *Alternate Worlds*,

> *The dozen years between 1938 and 1950 were Astounding years. During these years the first major science fiction editor began developing the first modern science fiction magazine, the first modern science fiction writers, and, indeed, modern science fiction itself (Gunn 1975: 89).*

Still popular with science fiction fans, Astounding Science Fiction won eight Hugo Awards for best science fiction magazine editorship, and two of the most prestigious awards in the field were named in Campbell's honour: John W. Campbell Award and John W. Campbell Memorial Award.

2.2.3. The 1950's: The Decade of Transition and Stylistic Experimentation

After Campbell's efforts in developing and expanding science fiction genre in the forties, came the fifties with a sequence of events and conditions which turned the attention of the general public more than in any time before to science fiction. Since the end of the Second World War and the dropping of the atomic bomb with the first move in the Cold War, science fiction has diversified and witnessed a growing seriousness and much more interest in the world and its future. Americans started to look in science fiction for explanations of what had happened and of the

consequences of entering the Nuclear Age. Though atomic power had been present in the science fiction field between the wars and more characteristically in Edwin Balmer and Philip Wylie's novels *When Worlds Collide* (1933) and its sequel *After Worlds Collide* (1934), it became a fixed motif in the stories of the 1950's exploring the implications of the nuclear bomb and its unlimited powers for destruction. Moreover, the post-holocaust theme made science fiction change its earlier vision of an earthly paradise to the nightmare of an earthly hell. The result was that after the enthusiastic adulation of the American scientific progress and achievements, the time came for criticism of the modern highly technological and industrial society.

The other important event that had a greater impact on the new orientations of science fiction in the 1950's was the advent of space flight which seemed to many people like an extension of science fiction. Space flight had been for many years the biggest dream of science fiction writers and fans alike, and the idea of space travel had constituted a subject of power fantasy in all science fiction magazines. Suddenly it became reality with the launching of the first Sputniks and satellites –the first Sputnik went into orbit in October 1957- leading to the beginning of the Space Age. And when the impossible happened, people began to expect the unexpected, and science fiction writers were given more impetus in writing speculative fiction. However, the realisation of the space flight dream was not all positive in science fiction stories. Alongside the anxieties and fears of the nuclear holocaust, the fifties were also characterised by the fear of dehumanisation in the face of the stars and planets as a result of the huge progress going on in the field of space flight. In fact, many science fiction writers attempted to express anxieties about achieving space travel and confronting other unknown worlds with the possible consequences they might entail. That confrontation, called by Brian Aldiss and David Wingrove "the

culture shock of the alien" (Aldiss and Wingrove 2001: 275), constituted a blow to the psyche that only science fiction professionals could foresee and express. Moreover, the idea of depersonalisation led many writers to depict earthmen as helpless losing the powers they enjoyed in the earlier decades to their enemies. The fear of dehumanisation was further deepened by varying degrees of repression and governmental coercion that characterised the Cold War period. Many of the more thinking science fiction writers found themselves stuck with the problem and their stories took on the satirical tone criticising the post-war American society and its ideals, and depicting protagonists who became no longer the highly trained and in control of events, but rather ordinary individuals and subject to manipulation by the various powers in society. As a result, science fiction magazines of the period became tainted with darkness and pessimism reflecting the new anxieties and stresses that the modern American society caused to its people. Furthermore, few prominent authors like Robert Heinlein became politically engaged with a strong current of libertarianism that anticipated the liberal-minded society of the 1960's.

All these dominant ideas of the decade found their expression through the existing props of science fiction which include: rocket ships, robots, time travel, technological machines, aliens, future war, alternate worlds, and Psi powers. Though interplanetary adventure was still dominating all other modes, writers combined different other elements together and expanded the field by incorporating twentieth-century traditions as satire and surrealism in an attempt to bring new fresh outlets to the genre and achieve literary maturity. A lot of writers who had already appeared in Astounding began to explore new visions and to experiment with style and narrative techniques similar to the finesse of mainstream literature. During this last decade of science fiction magazine, there were more than ninety magazines in the field, but

those which exerted considerable influence on science fiction's form and subject matter and which gathered the most notable writers were The Magazine of Fantasy and Science Fiction, founded in 1949 and edited by Anthony Boucher and J. Francis McComas, and Galaxy, founded in 1950 by Horace L. Gold. While the former emphasised stylistic sophistication, the latter concentrated on witty satire stressing sociological criticism with such writers as Alfred Bester, Frederik Pohl, Robert Checkley, and William Tenn. As a result, the genre began to witness a shift in interest from the hard sciences (engineering, astronomy, physics) for their own sake to the soft sciences (sociology and psychology) to explore new themes and new visions.

The best science fiction output of the 1950's is represented by the stories published in the two famous magazines Galaxy and The Magazine of Fantasy and Science Fiction, although some important authors published in other lesser magazines such as If. Galaxy, the most representative of the decade, invites Alfred Bester, a scriptwriter who had already written science fiction in the 1940's, to contribute to the magazine and to the development of the genre. His major novels of interplanetary adventure *The Demolished Man* (1953) and *The Stars My Destination* (1956) draw on the elements of space piracy and psychic supermen with an emphasis on psychological study of character that had not been known earlier. Bester's literary experimentation evokes the stylistic tradition of William Blake that the epigraph of *The Stars My Destination* is drawn from Blake's poem "The Tyger". Among the most successful satirists in Galaxy also were Frederik Pohl and Cyril Cornbluth who reacted to the newly flourishing field of advertising and consumerism as others responded to the American expansion of technology. It is in *The Space Merchants* (1953) that they draw on the powers of corporate business and advertising agencies

and the problems of overpopulation and ecological imbalance. *Search the Sky* (1954) is their other novel about the world destroyed by a nuclear holocaust, and after Cornbluth's death, Pohl wrote another story about the consumer society "The Midas Plague" (1954) which deals with the problem of keeping up with the robots' extravagant production. Pohl's contributions were enormous not only in fiction but also for his editorial skills in Star, If, and also in Galaxy after he took over the magazine after Horace Gold. The Cold War epoch brought forth another noted satirist in Damon Knight whose best stories about conformism and alien threat include "Ticket to Anywhere" (1952), "Four in One" (1953), "The Country of the Kind" (1955), and "To Serve Man" (1950) which was adapted as an episode of the 1960's television series *The Twilight Zone*. Knight also shone as a science fiction critic whose reviews were gathered into In Search of Wonder (1956) which had remarkable effects on science fiction writers and readers of the time. Besides, he went on to found The Science Fiction Writers of America in 1965 of which he became the first president, and which has become the most famous representative organisation of science fiction genre in the United States; it presents the Nebula Award for best science fiction work (novel, short story, novella, and script) and the Damon Knight Memorial Grand Master Award for lifetime achievement. Another maturing talent in both fiction and criticism was James Blish better known for his galactic stories such as "Common Time" (1953), "Beep" (1954), "Earthman Come Home" (1955), "The Seedling Stars" (1957), and "Fallen Star" (1957). Blish's critical articles appeared in two books: *The Issue at Hand* (1964) and *More Issue at Hand* (1970), and his most famous contributions were to the *Star Trek* canon by writing eleven adaptations from episodes of the famous TV series.

The appearance on the pages of Galaxy of Robert Chekley was also quite remarkable with his satirical genius in treating the fears and anxieties of everyday life in the modern society. In his stories of extrapolated futures, he employs space travel and time travel in an attempt to grapple with the social implications of technology. His collection Pilgrimage to Earth (1957) contains the most outstanding stories "Ask a Foolish Question", "A Ticket to Tranai", and "The Store of the Worlds". Likewise, Ray Bradbury shared the same anguish felt by the American society at the advent of the Nuclear Age along with the pressures of the Cold War. In his novel ***Fahrenheit 451*** (1953), which appeared in Galaxy as "The Fireman", Bradbury uses the future to reveal his deeply emotional reactions to the trauma of his generation concerning the denial of intellectual freedom, so that many critics have qualified it as a protest against the McCarthyism of the Cold War era. In ***The Martian Chronicles*** (1950), a story of future history, Bradbury chronicles the colonisation of Mars after the Earth had been atomically devastated, and relates the conflict between the Martians and the new colonists. In the other magazine, The Magazine of Fantasy and Science Fiction, the fame of Walter Miller rested on his post-apocalyptic novel ***A Canticle for Leibowitz*** (1960) which emerged as the best of the after-the-bomb novels of the period with its distinctive style and strong historical sense. It was among the first stories to deal with rebuilding civilisation after nuclear holocaust. ***A Canticle to Leibowitz*** is the only novel Walter Miller published in his lifetime and for which he is primarily known; however, he produced dozens of short stories including "Anybody Else Like Me?" (1952), *"Dumb Waiter"* (1952) about the negative effects of technology, and "The Darfsteller" (1955) about robot actors; the latter won the Hugo Award for best short story. William Tenn was also concerned with the post-holocaust world in "Eastward Ho!" (1958) and with the awful confrontations with

the future or with aliens in “The Liberation of Earth” (1953) and “Down Among the Dead Men” (1954). He is one of the science fiction genre’s reigning satirists with a strong humorous view point on life and its macabre conditions.

When the new science fiction magazines appeared in the 1950’s, the two biggest figures in the field that enjoyed enormous popularity, Isaac Asimov and Robert Heinlein, began publishing in Galaxy and The Magazine of Fantasy and Science Fiction although their careers began in Campbell’s magazine in the forties. Asimov’s most notable works after the Foundation series are *The Caves of Steel* (1954) and *The Naked Sun* (1957) which are extensions of his earlier robot stories, and they involve detective mysteries and elements of futuristic psychology. Asimov appeared at the height of his powers in *The End of Eternity* (1955) which falls into the category of time travel stories, and in his short story “The Martian Way” (1952), Asimov expresses his distaste for the anti-communist campaign of McCarthy and his committee. But the most striking thing in Asimov’s novels is his solid conservative faith in technology in contrast to Robert Heinlein who is known more for his libertarian political philosophy which reached maturity in the later decades. Heinlein’s most outstanding novels of the 1950’s are *Starship Troopers* (1959), a story about future war, and *Double Star* (1956), a space adventure.

Stories of Psi powers, on the other hand, were not new in science fiction and had been popular ever since the first appearance of van Vogt’s *Slan* in 1940, but they absolutely boomed in the 1950’s with the shifting interest in the soft sciences and more particularly in psychology, and they eventually underwent a remarkable development. In fact, the interest began with L. Ron Hubbard who formulated what he called an exact science of psychotherapy which would uncover the superpowers in

every human. While Hubbard formalised his beliefs in the new religion called scientology, actually opening the Church of Scientology in 1955, Psi powers became a given attribute of supermen ever since. The major writers who rose to fame with psionic stories are Alfred Bester in *The Stars My Destination* (1956) and Theodore Sturgeon in *More Than Human* (1953), a novel of human evolution that depicts the human potential through Psi powers. In general, science fiction magazines of the period brought into the light numerous other writers who contributed with style and themes to the development of the genre, and helped enhance the American dominance of the field. A selective list may include Philip K. Dick, Fritz Leiber, Clifford Simak, Harry Harrison, Ward Moore, James Gunn, Wilson Tucker, and Poul Anderson.

Another important change that characterised the history of American science fiction during the fifties happened first in the format of the magazines when the pulps had died by the middle of the decade to be replaced by digest-size magazines with a more subtle presentation resembling more paperback books. The change had the benefit of making the magazines seem more grown-up and more literary than the pulps which were almost like comic books. However, the serious disruption of the magazine market starting from 1957 and the post-war paperback-book publishing boom led many writers to confine their works to the new paperback publishing industry. Therefore, by the end of the 1950's, science fiction ceased to be identified primarily with the magazines, and the brand names under which science fiction could be commercialised became specialised categories or individual authors instead of Galaxy, Astounding, or The Magazine of Fantasy and Science Fiction. The end of the four-decade-science-fiction-magazine era cleared the way for a new period of

more growth and maturity with sophisticated themes and stylistic distinction known as the New Wave.

2.3. The New Wave

By the end of the 1950's, the best magazine science fiction was already comparable to fiction published in more traditional literary venues, and readers began getting a taste of the experiments undertaken by the most notable writers of the decade, although critics outside the genre rarely paid attention to its achievements and they were looking to science fiction in terms of the early pulp formulas. In reality, with hard science fiction still being the heart of the genre and with the overuse and recycling of the same traditional themes and props in expressing the big changes in society, there were signs in the early 1960's that limits were being reached, and those signs could no longer be ignored. Indeed, some young writers came to feel, like Thomas Disch, Harlan Ellison, and Robert Silverberg, that science fiction had become a straitjacket although supposed to emphasise change and newness (Clute 2001: 866). Actually the genre was in pressing need of more innovative outlets and great sophistication of expression to make the science fiction ghetto wall crumble and to achieve real maturity and recognition within the mainstream literary tradition. The 1960's were the years which brought this biggest change into the field and broke down the barriers between science fiction and mainstream fiction by adopting the narrative strategies that had long been familiar in the mainstream novel, rejecting standards and exploring changing states of consciousness with more inclination towards psychology and the soft sciences than to hardware.

While in the 1950's science fiction writers and readers were inspired by worries about the future because the Cold War and the rapid expansion of technology fostered paranoia of all kinds, they became even more affected by the radical change of society during the 1960's which led to great changes in the themes and in the way science fiction was written. During the 1960's, American society was convulsed with great turbulent upheavals never witnessed before in its history so that the decade was often referred to as the era of turbulence, trauma, paradoxes, and paranoid fears and anxieties. New technologies proliferated and the boundaries of science were expanding rapidly; the decade saw the development of the laser (1962), supersonic aircraft (1962), the first heart transplant (1967), the first weather satellite (1960), and more important human beings into space and then landing on the moon (1969). Public perception of the huge scientific progress, after the experience of the bomb, was that of a world facing imminent destruction and radioactive doom that continued to haunt Americans throughout the decade. By late 1962, the world actually faced just such a science-fictional threat –the Cuban Missile Crisis when nuclear war seemed about to break out. Simultaneously, the political scene intensified the terror with the paranoid campaign against communism with its fearful conformity and obsessive concentration on the "alien" as enemy; the Berlin Wall being erected in 1961, giving the Cold War a potent new horrific dimension; the growing moral crisis of the Vietnam War; and then the famous series of political assassinations (President J. F. Kennedy, Martin Luther King, and Robert Kennedy). All those happenings fed directly through into science fiction imagination, but it was more upon their social manifestations that science fiction writers had the more focus. Therefore, pessimism in science fiction certainly did increase in the 1960's and reflected to a great extent the massive cultural changes taking place in both Europe and the United States at

that time as a reaction against the politically dreariest times. Indeed, the young diverted potential political rage into self-indulgence with psychic unbuttoning that reflected their desire to break the rules, to import new life-style, and to assure a widening of choices in their life rather than conformity in ideas, attitudes and expression. The result was that the decade's social movement known as the counterculture found echoes in the science fiction of the period with its qualities including an interest in mind-altering drugs and oriental religions, a desire of violating taboos and rejecting conventional social norms with a marked interest in sex, a strong involvement in pop art and psychedelic rock music and other entertainment media, and most importantly a pessimism about the future focused on the likelihood of disaster and a cynicism about American politics. Much of the science fiction of the 1960's and even of the 1970's shared the qualities of the counterculture movement adopting the hippie character as the representative figure that interpreted the psychosis of the age.

Within that atmosphere, the New Wave science fiction emerged, though not a formal literary movement but rather more a state of mind with a strong belief that the genre could be taken seriously as literature deeply concerned with the problems of the world and with new sophisticated themes and stylistic distinction that began eventually to feed back into mainstream fiction. Indeed, the use of science fiction themes and ideas began to invade the writings of non-science fiction writers among other sources manifest especially in the works of Angela Carter, J. G. Ballard, and Kurt Vonnegut. At that time, there was a revival of the British speculative fiction which had flagged since the days of H. G. Wells, and it began to develop in the American mode with the science fiction magazine New Worlds in which the notable British science fiction writers and even some Americans made their reputation. The

New Wave evolved first around New Worlds in the mid-1960's borrowing the term from film criticism where it was used in the early 1960's by the French Jean-Luc Godard and François Truffaut as "Nouvelle vague". The term was used by the French to refer to the experimental cinema that broke with narrative tradition, relying primarily on jump cuts, meanderings, and plotless immersion in image. The term was appropriated by the British novelist Christopher Priest –some of his works are classified as science fiction- to refer to an equally disruptive and daring science fiction that could fit the chaos that people of the 1960's were living in. The first writers whose works were subsumed under the New Wave label were British notably Brian Aldiss and J. G. Ballard who were publishing their stories in New Worlds after Michael Moorcock took over the magazine. Moorcock encouraged a good number of American writers with literary experimentation and technique, and some of their stories were published in his magazine, such as *Camp Concentration* (1967) by Thomas Disch, "The Heat Death of the Universe" (1967) by Pamela Zoline, *Bug Jack Barron* (1969) by Norman Spinrad, and stories by Roger Zelazny, Samuel Delany, and John Sladek.

The most striking thing during the 1960's was the enduring impact the New Wave science fiction had and the longevity of its biggest names who expressed dramatically all the excesses of the decade with more excesses in the way of writing. Science fiction writers were also helped by the growing market of paperback book publishing after the gradual decline in science fiction magazine circulation, and this boom led to an explosive growth in science fiction readership so that over-production became a feature of the sixties and later decades, and the genre achieved enormous international popularity with science fiction books regularly hitting the best-seller list. The prosperity of the genre was further enhanced by the various international

awards given for the best and most distinguished works in the field involving innovative skills and themes. In addition to the Hugo Award (from 1955), the Nebula Award was created in 1965 followed by the British Science Fiction Association Award in 1970 and the John Campbell Memorial Award in 1973.

Among the great number of New Wave writers whose works enjoyed enormous popularity, became science fiction classics, and gained awards for their contributions to establishing the genre as a serious distinct and recognisable branch of literature, we may list notably Robert Heinlein, Isaac Asimov, Harlan Ellison, Thomas Disch, Samuel Delany, Roger Zelazny, Frank Herbert, Ursula Le Guin, Larry Niven, and Philip K. Dick. A hard science fiction-obsessed writer, Robert Heinlein was the eloquent voice of the New Wave 1960's with his high standards of literary quality and his best-selling work *Stranger in a Strange Land* (1961), a deeply rooted novel in the drop-out hippy counterculture of its time. The work achieved cult status amongst university students and hippies for its adoption of the perspective of difference and its anticipation of the dramatic switch in attitudes towards the social norms and morals that swept America in the 1960's. Developed within an alien-populated setting and using Psi powers, the story explores Heinlein's most libertarian themes including free physical and emotional love, radical individualism, and free discussions of religion and morals. *Stranger in a Strange Land* was followed by *The Moon is a Harsh Mistress* (1966), which depicts the revolt of a lunar colony against the rule of earthmen. The same libertarian ideas dominate the novel with more political involvement into the philosophy of anarchism. Another product of the counterculture environment of the 1960's was Frank Herbert's *Dune* (1965), frequently cited as the world's best-selling science fiction novel. Set in a far future interstellar empire, the story addresses the future of humanity rather than the future

of its technology by exploring complex ideas involving politics, religion (he employed concepts borrowed from Zen Buddhism), psychology, ecology, and philosophy, which inspired his readers to become more interested in the ideas of soft sciences in science fiction. *Dune* was adapted into a film in 1984 directed by David Lynch, and the novel had five sequels dealing all with the Dune universe: *Dune Messiah* (1969), *Children of Dune* (1976), *God Emperor of Dune* (1981), *Heretics of Dune* (1984), *Chapterhouse Dune* (1985). Two other remarkable innovators in narrative strategies were Samuel Delany and Roger Zelazny. Delany's novels were familiar fifties models of post-holocaust worlds of mutant beings but with great experimentation in terms of language and image. His major works include his first novel *The Jewels of Aptor* (1962) followed by *Babel -17* (1966), *The Einstein Intersection* (1967), and *Nova* (1968) which all employ mythology and allusion with a strong sense of aesthetics. Delany was the first writer who had visiting guest professorships in various universities giving lectures and relishing literary debate, and soon it became the fashion. Roger Zelazny and Samuel Delany shared a common feature in their work by using mythology, and while Delany concentrated on the post-apocalyptic settings, Zelazny's worlds are mixtures of science fiction and fantasy involving plausible magic elements, science, and sometimes supernatural creatures. The experimentation with old mythic patterns in Zelazny's novels served to depict the features and habits of the American society of the 1960's and to reflect the struggle for individual expression. Zelazny's major novels include *This Immortal* (1966), a post-nuclear story about mutation drawing on a Greek mythology; *The Dream Master* (1966), a story about psychotherapeutic innovations in the future; *Lord of Light* (1967), set on a colonised alien planet and uses Hindu mythology; and *Creatures of Light and Darkness* (1969), set in the far future with humans on many

worlds incorporating elements of fantasy and ultra-futuristic technology and drawing on Egyptian mythology. Harlan Ellison had also a great impact on mid-sixties science fiction with his short stories, screenplays, essays, and anthologies which brought him numerous Hugo and Nebula awards. Most of his stories were preoccupied with hardware and engineering devices and hyper-spacial mechanics, but in contrast to Asimov's stories, they challenge the belief that technology is good for humanity. Zelazny's collections contain such famous stories as "I Have no Mouth and I Must Scream" (1967), "The Beast that Shouted Love at the Heart of the World" (1968), and "A Boy and His Dog" (1969) which constituted the basis of a post-apocalyptic movie adaptation in 1974 of the same name. In addition to writing essays, Ellison contributed in writing original scripts for *Star Trek* episodes and he edited two important science fiction anthologies *Dangerous Visions* (1967) and *Again, Dangerous Visions* (1972) which helped define the New Wave science fiction including the best talents and high quality production of the period.

In addition to experiments in style and subject matter, there were also excesses of the New Wave movement whose writers sometimes revealed a vivid obsession with entropy intermingled with extreme gloom and pessimism. Entropy is a technical term used in thermodynamics and was first used in science fiction as a concept with the New Wave meaning increasing disorder. Philip K. Dick is the writer who used much of the concept in nearly all his work and he was the first to popularise it. Actually Dick forged a powerful new vision about the world conditions which he named "kipple", and he explained this in his novel *Do Androids Dream of Electric Sheep?* (1968): "Kipple is useless object… when nobody is around, kipple reproduces itself… It's a universal principle operating throughout the universe; the entire universe is moving towards a final state of total, absolute kippleization" (Dick

2004: 53). It is indeed total and absolute disorder that crippled the whole modern world. In Dick's novels, things are never quite what they seem; there are always shadow lands of hallucination, paranoid states and chaos. For Dick, there are artistic possibilities for all human problems, or in Adam Roberts's terms "paranoid aesthetic" (Roberts 2000: 81), but they finally degrade towards meaningless noise and inanity. Critic Bruce Gillespie clarifies Dick's existential vertigo by stating that Dick repeatedly takes the readers

> *on an abrupt journey from a false reality to a real reality or, in the extreme case, a roller coaster ride down and down, leaving behind ordinary reality and falling into a totally paranoid alternate reality. By the book's end, there is nothing trustworthy left in the world (Gillespie 2001: philipkdick.com).*

Indeed, Dick's dark world is that of shifting realities encompassing paranoia and hallucination that call into question the nature of reality itself. Moreover, his fiction is often concerned with inward exploration in contrast to that of the outside physical world that one of the buzzwords of the period that became a commonplace with reference to New Wave writers was inner space. The term refers to the deep feelings of anxiety, fear and guilt that lay beyond all physical themes of science fiction; in other words, it is related to the exploration of the hidden life of the psyche that Philip Dick was obsessed with. Among Dick's finest novels of the period *The Man in the High Castle* (1962), an alternative worlds story depicting a contemporary world in which World War II was won by the Axis Powers; *Flow My Tears, the Policeman Said* (1974), a story about a world in which the protagonist finds he does not exist revealing an alternative reality with severe psychic damage; and *Three Stigmata of Palmer Eldrich* (1965), an apocalyptic story of alien invasion. His two other brilliant novels *Do Androids Dream of Electric Sheep* (1968) and *Ubik* (1969) are the subject of study in the chapter devoted to the writer. The same obsession with entropy and

the desire to liberate science fiction from some of its strict formula and narrow conventions were the key to Thomas Disch's New Wave work which established him as one of the most innovative science fiction writers. Thomas Disch travelled to London and began writing for New Worlds magazine where he became more involved with the darker and more serious style of the New Wave. His novels are deeply concerned with human conditions in a repressive and technologically dominated world, and they are rich of metaphors such as *The Genocides* (1965), an apocalyptic story of the extermination of humans by aliens; *Echo Round His Bones* (1967), set in the far future where a machine is developed to transmit matter to Mars; and *Camp Concentration* (1968), which is a metaphoric treatment of the objection to the war in Vietnam.

As political issues continued to deepen in the New Wave science fiction, there are two important things worth stressing in the development of the genre from the 1960's to the present day. One of the fundamental challenges has been the growth of authors of colour; another is the rise of women writers of science fiction. From the early beginnings of the genre, every single science fiction writer so far had been white and male, and with the great upheavals in the American society of the 1960's, two of the best-known African-American writers emerged in the field; they are Samuel Delany and Octavia Butler. Meanwhile, the revival of feminism in the 1960's found critical expression in science fiction going from sex-role reversals and a challenge to patriarchal commonplaces to more subversive attitudes and sexist views expressed notably by Joanna Russ in her novel *The Female Man* (1975). One of the female giants of the period was Ursula Le Guin whose interest in science fiction writing was quite varied and included mainly an interest in social sciences, such as anthropology and psychology, used to explore the world of human cultures

and the interaction between them. Her avid concern with sexual identity can place her work in the category of feminist science fiction, and her feminist views represented at that time a significant revolution in the treatment of sex in science fiction that developed in the 1960's and 1970's. Her most famous feminist science fiction books are *The Left Hand of Darkness* (1969) and *The Dispossessed: An Ambiguous Utopia* (1974) which are both set in galactic universes and evolve around the concept of the expansion of human culture through the galaxy, and while the first explores the new neuter human society where biological gender plays no role, the second is an utopian story based on some kind of anarchism. Both books won Hugo Awards and Nebula Awards for best science fiction novels. Another popular woman science fiction writer whose novels include more female characters and mark the feminist evolution of her sensibilities is Marion Zimmer Bradley who is better known for her masterpiece *Stormqueen* (1978). The novel belongs to the Darkover series which deals with centuries of technological and cultural clashes in the colonisation of a distant planet from the perspective of women characters present in the stories. Bradley's feminist view appeared clearly in her statement in 1985: "I think women's liberation is the great event of the twentieth century, not space exploration. One is a great change in human consciousness; the latter is only predictable technology, and I am bored by technology" (Quoted by Roberts 2000: 95). This shift in human consciousness led also to the introduction of a large body of female fans to science fiction readership fostered by the wide spread of science fiction TV series and films mostly adapted from the printed literature.

After the striving, experimental and prosperous 1960's, the 1970's were the years of consolidation, integration and wide public acceptance. The decade was widely regarded as an interval between the revolutionary changes of the sixties and

the upcoming wave of cyberpunk in the eighties and nineties. In contrast to any previous decade, the period witnessed enormous amount of science fiction works published with limitless diversity and a continuous sensible care for craftsmanship. Moreover, as science was growing more complex and more specialised, new technologies such as biotechnology, computer science, and cloning fed new themes into the genre along with the most prominent concerns of the age which include the proliferation of the nuclear power, ecology, overpopulation, and sexual liberation. The old guard writers were present in the decade of consolidation with their works such as Isaac Asimov in his super-science galactic story *The Gods Themselves* (1972), Larry Niven in his hard science fiction exemplified by *Ringworld* (1970) and *Protector* (1973), and Frederik Pohl in his Nebula-winning novels *Man Plus* (1976) and *Gateway* (1977), the first dealing with the subject of cyborgs and the second with space engineering. Meanwhile, the decade brought new prominent figures whose novels gained various awards, and these include Barry Malzberg's *Beyond Apollo* (1972) about a disastrous manned expedition to the planet Venus, Gregory Benford's time-travel novel *Timescape* (1980), and Kate Wilhelm's *Where Late the Sweet Birds Sang* (1976), a tale of global pollution and human cloning when those ideas were still new. Finally, it is fair to say that during the New Wave period, science fiction found new freedoms and achieved full maturity and more expanding popularity in the United States and in many other countries around the world, and the market itself showed a greater readiness to accept sophisticated science fiction writing. Indeed, with the New Wave, science fiction convulsed marvellously into the crisis of modernism enriched by techniques drawn from modernist general fiction, myth and art, opening its texts to radically endless reinterpretations. At the same time, the prescient spirit of Philip Dick opened the way for a new generation of science fiction

innovators towards a postmodern concern characterised essentially by a profound questioning of reality and a deep psychological development of character. It is with this richness and variety that the decade of the 1960's made its mark on science fiction and science fiction made its even greater mark on the world.

2.4. From 1980 to the Present: The Age of Cyberpunk and Space Opera

American science fiction, which began as a genre in 1926, enjoyed a Golden Age before 1940 and matured steadily through the post-war decades, was about to experience a real invigoration throughout the last two decades of the twentieth century. While the biggest names of science fiction as Jack Williamson, Robert Heinlein, Isaac Asimov, and Frederik Pohl, those who had begun to gain fame by the 1950's, stayed remarkably active, many other names appeared on the scene whose careers proved successful in making science fiction apprehend the new and grasp the huge transformations inherent in the industrialised Western world. It is however important to mention that prior to the advent of cyberpunk and due to the massive science fiction publishing industry of the 1970's, there was a sense that the genre was running on inertia. Although the science fiction readership broadened steadily during the 1960's and 1970's, written science fiction began to lose its status as the default form of the genre to more easily accessible and technologically developed forms as cinema, television, and video and computer games which proliferated on a massive scale from the beginning of the 1980's to the present day. All these multimedia products competed heavily with written science fiction literature for the major share of popular attention. Additionally, the huge progress and dominance of those media categories led to the appearance of the phenomenon of TV and film novelisation and spin-offs which threatened the high quality genre with drowning in the midst of commercial imperatives. When the information explosion began dramatically to

impact upon the lives of people in the 1980's, science fiction writers who came to maturity since 1980 have indeed attempted with sharp intelligence to catch up with the world's new transformations and to make of science fiction a genre capable of understanding the world in terms of information and the technological means involved. The only form of science fiction to grapple imaginatively with the aspects of the dizzying changes in the world of information was cyberpunk. The movement which came to prominence with William Gibson's first novel *Neuromancer* (1984) became related to any artistic and cultural practice generally concerned with computers and the relationship between technology and human life. Typical of cyberpunk's antiauthoritarian politics was the concept of control which was envisioned in terms of inherently repressive and dominating social and economic structures and institutions and more important the mechanised and technological control of social life and of the human body itself. And when the Internet began to shape a new sense of the nature of the real world, science fiction writers became more intensely involved with the dizzying and confusing new order of life in which human characters find that they have been totally disenfranchised from any real power.

At the centre of cyberpunk is the fiction of William Gibson that launched science fiction readers into a near-future world in which the natural and the authentic have become meaningless and void. Gibson's imagined future of ubiquitous digital communication and media technologies, artificial intelligence, and biotechnological body-modifications has much resemblance to Dick's dystopias in which marginalised characters struggle to avoid social control in the highly mechanised Western world. Whether in *Neuromancer* (1984), *Count Zero* (1986), and *Mona Lisa Overdrive* (1988), or in his later novels *Virtual Light* (1993), *All Tomorrow's Parties* (1999),

and *Pattern Recognition* (2003), Gibson's major concern was the depiction of a future world in which the controlling power resides within corporations merged with various complex technologies that lead eventually to total disorientation and disillusion of characters. It is the same world depicted in *Blade Runner*, the movie adapted from Dick's *Do Androids Dream of Electric Sheep?* whose fascination with corporations, the fragmentation of society, and, above all, the detritus of urban life, makes it the most influential visual evocation of a cyberpunk future. It is in fact the influence of film-noir *Blade Runner* that made Gibson create the profound metaphor of cyberspace especially in *Neuromancer,* and postulate the nature of the world to come in which, in John Clute's words, "we are hugely empowered, that we are essentially powerless" (Clute 2003: 72). Most immediately, other science fiction writers became associated with the cyberpunk tradition, and the core group consisted of such names as Bruce Sterling, Rudy Rucker, John Shirley, Pat Cadigan, Greg Bear, and Orson Scott Card.

Gibson's colleague Bruce Sterling was the chief ideological promulgator of the cyberpunk movement and his major contributions were his *Schismatrix* (1985) and the associated stories collected in *Crystal Express* (1989). In these stories, Sterling envisions a future history of expansion across the solar system when two post-human factions compete for supremacy. One faction, the "Shapers", uses genetics or bio-engineering and psychology, and the other, the "Mechanists", employs computers and body prosthetics to reshape themselves to adapt to their new environments. In contrast to the dystopian mode of Gibson, Sterling's focus on the physical and psychological transformations of humans projects the idea of potential human diversity in the face of contingent social and economic systems. Sterling's obsession with the operations of power in the global economic-electronic order appears in

Islands in the Net (1988) and *Holy Fire* (1996), whereas the techno-thriller *The Zenith Angle* (2005) deals with a cyber-security expert who is involved with the US government in fighting terrorism after 9/11. Sterling's latest novel *The Caryatids* (2009) moves away from cyberpunk to the current environmental issues and the subject of cloning. The most significant contribution of Sterling to the movement was *Mirrorshades: The Cyberpunk Anthology* (1986) which defines cyberpunk and establishes Sterling as the major cyberpunk propagandist.

John Shirley's cyberpunk writings were equally significant. In addition to collaborating with William Gibson in writing short stories, his most remarkable cyberpunk novels consist of *A Song Called Youth* trilogy: *Eclipse* (1985), *Eclipse Penumbra* (1988), and *Eclipse Corona* (1990), which depict a dystopian future following a third world war. Amidst chaos and upheaval, the neo-fascist alliance strives for global supremacy with such cyberpunk staples as media manipulation, highly invasive technologies, and even drugs. The trilogy can be seen politically as reflecting the rise of the new right and its obeisance to multinational capital and corporate power. Associated with Gibson, Sterling and Shirley, the mathematician and computer scientist Rudy Rucker soon became a prominent founder of the cyberpunk movement. Rucker is best known for his novels in the Ware Tetralogy: *Software* (1982), *Wetware* (1988), *Freeware* (1997), and *Realware* (2000); the first two books received the Philip K. Dick Award for best novel in 1983 and 1988 respectively. The stories' central focus is the development of artificial intelligence in robots through evolution rather than through design, and the major issues developed concern free will, robot consciousness, and immortality.

Pat Cadigan is another cyberpunk contributor whose major novels *Mindplayers* (1987), *Synners* (1991), and *Fools* (1992) portray a far more destabilised and fragmented world undermining any sense of humans as autonomous and in control of their own fate. In Padigan's stories, the human mind is a real explorable place where the line between reality and perception is blurred, and it is via technology that the human mind and its perceptions could be accessed. Another science fiction career in the cyberpunk tradition that had begun in the late 1970's and reached its peak in the mid-1980's was that of Greg Bear whose work deals with a variety of science fiction tropes including galactic wars, alternate worlds, and cyberpunk. In the latter, Bear produced his most influential novels *Blood Music* (1985), which deals with the nature of consciousness and artificial intelligence in the light of such sciences as biotechnology and nanotechnology, and *Queen of Angels* (1990), a story about the coming to consciousness of an artificial intelligence through nanotechnology that has transformed every aspect of the American society.

With all its new ideas and imagery brought to the fore, cyberpunk was of great impact upon science fiction and produced much that was innovative and fresh and allowed the infusion of new blood into its heart. The greatest impact, however, was that of cyberpunk on the cinema which has produced some of the finest films in the field such as ***Total Recall*** (1990) adapted from Dick's story *"We Can Remember It for You Wholesale"* (1966), ***Strange Days*** (1995), ***The Matrix Trilogy*** (1999-2003), ***Hardware*** (1990), ***Dark City*** (1998), π or ***Pi*** (1998), and ***Cypher*** (2003). And though much cyberpunk was written during the 1980's and 1990's and it still has its fervent admirers in the twenty-first century, many non-cyberpunk writers, especially those called Humanists led by Kim Stanley Robinson and comprising Sturgeon, Le Guin and Disch, directed their efforts towards the renewal of traditional science fiction

worlds in relation to the world-historical processes relying on technological innovations and discoveries as important engines of change. Robinson's interest in ecological and sociological themes was manifest in almost all his work which include *The Wild Shore* (1984) and its two thematic sequels *The Gold Coast* (1988) and *Pacific Edge* (1990), known together as the *Three Californias Trilogy*. The stories deal with different possible and speculative outcomes for Orange County, California in the near future with political and ecological concerns. Moreover, The *Mars Trilogy*, comprising *Red Mars* (1992), *Green Mars* (1993), and *Blue Mars* (1996), shows Robinson's lifelong fascination with the planet Mars (he was a member of the Mars Society), and provides detailed procedures for humanity's inhabiting of the planet through terraforming covering the next two hundred years of future history. Robinson's celebration of potential human move to Mars, while Earth suffers from overpopulation and ecological disaster, is exposed through a set of powerful arguments highlighting sociological and scientific advances on the Red Planet which allowed his three speculative texts win a Nebula Award for *Red Mars* in 1992 and two Hugo Awards for *Green Mars* in 1994 and for *Blue Mars* in 1997. And while *Antarctica* (1997) follows the *Mars Trilogy* footsteps and covers the future history of the icy continent with the same ecological concern, *The Science in the Capital* series, encompassing three novels, *Forty Signs of Rain* (2004), *Fifty Degrees Below* (2005), and *Sixty Days and Counting* (2007), deals with the consequences of global warming. In exploring themes related to human conditions and the world future history, Robinson advocates his orientation in science fiction writing by stating in 2002, "Rapid technological development on all fronts has combined to turn our entire social reality into one giant science fiction novel, which

we are all writing together in the great collaboration called history" (Robinson 2002: 1-2).

In addition to the so called Humanist trend, which offered an alternative to cyberpunk, the 1980's and the 1990's witnessed revivals of interest in the subgenre of space opera –stories dealing with galactic conflicts and wars- as well as the flowering of alternate history fiction –stories about worlds resulting from a key event that differs from what actually happened in history. The key figure in the revival of space opera tradition was Gene Wolfe who is described by John Clute as "the one writer whose creative grasp and imprint and prolificacy are so unmistakably manifest that one may plausibly use the word 'great' in describing his work" (Clute 2003: 69). Wolfe's central and most highly regarded work comprises three multi-volume novels which join into one meta-work referred to as the *Solar Cycle* or the *Sun* works. The first work is *The Book of the New Sun* (1980-1983), comprising four novels, followed by *The Book of the Long Sun* (1993-1996), consisting of four novels, and the last three novels constitute *The Book of the Short Sun* (1999-2001). The stories in the cycle take place in the distant future where the sun has dimmed considerably and the Earth is cooling that humans move living in a star system with two habitable planets involving conflicts with their native inhabitants. Many other science fiction writers of the period took space opera and planetary romance as their preferable mode of expression, and the most prominent of all was Vernor Vinge who was deeply concerned with the invasive growth of technology and its consequences on humanity, and he often combined space opera with such cyberpunk elements as artificial intelligence. Vinge's view about technology is expressed in a famous essay "The Coming Technological Singularity" in 1993 in which he argues that, "Within thirty years, we will have the technological means to create superhuman intelligence.

Shortly after, the human era will be ended" (Vinge 1993: www-rohan.sdsu.edu). Although Vinge came to prominence in 1981 with his short story "True Names", a prefiguration of an Internet world in the cyberpunk tradition, he shifted his concern from the near future to write two highly complex space operas whose setting is the outer space –the galaxy- and which depict worlds radically different from near-future Earth. In both *A Fire Upon the Deep* (1992) and *A Deepness in the Sky* (1999), Vinge envisions a galaxy with high levels of technology including superhuman intelligence, faster-than-light travel, but also with competing groups of humans that struggle over the control of the emerging alien culture. In a similar manner, Michael Swanwick was successful to import into the traditional planetary romance both cyberpunk and genetic engineering especially in *Vacuum Flowers* (1987), an exemplary modern space opera which deals with an inhabited galaxy where Earthmen have been subsumed by a cybernetic mass-mind known as the hive mind. Along with space opera, alternate history tales also found expression in a number of successful works of the two last decades of the twentieth century, including most notably Howard Waldrop's *Them Bones* (1984), Kim Newman's *Anno Dracula* (1992), and Connie Willis's *Lincoln's Dreams* (1987) and *Doomsday Book* (1992).

Moreover, the period saw an increasing genre-mixing process in which science fiction, fantasy and horror are mixed together, and this new trend in science fiction was represented mainly by Lucius Shepard in *Green Eyes* (1984) and *Kallimantan* (1990), Jonathan Lethem in *Girl in Landscape* (1998), and even Michael Swanwick in such works as *The Iron Dragon's Daughter* (1993) and *The Dragons of Babel* ((2008). The great number of pastiche works published by the end of the century with some consistency of vision in the American science fiction of the previous decades revealed a kind of nostalgia for science fiction of an earlier simpler period,

and this became more apparent when the central figures of cyberpunk such as Gibson, Sterling, and Cadigan wrote less cyberpunk or migrated elsewhere. As a result, a significant cultural change in the world of science fiction took place in 1992 when the Science Fiction Writers of America officially agreed to admit fantasy and horror writers to their ranks, and thus the organisation changed its name to the Science Fiction and Fantasy Writers of America while the acronym SFWA continues to be used till the present time. By that time, generic labelling became less insistent, and bookshops regularly place science fiction on the same shelves as fantasy and horror and sometimes the books are by the same authors. In the present time, many critics and scholars are having much worry about the future of science fiction in the midst of genre-mixing processes and mass production which are likely to absorb the genre into the mass culture of the twenty-first century. And while many views tend to express apocalyptic premonitions of science fiction's imminent death, the hope of revitalisation and invigoration of the genre is still widely expressed with greater numbers of science fiction writers who emerge every year and who find new ways of expression like the desktop publishing facilities and the semi-prozines –magazines coming between amateur fanzines and professional magazines- such as Locus (from 1968) and the New York Review of Science Fiction (from1988) which serve as a debating ground for many young writers and which have compensated to a larger degree for the shrinking of the professional magazine market. Besides, new horizons are likely to appear and new frontiers and possibilities will undoubtedly dominate the science fiction writing regardless of whether science will prove or disapprove them. More important in the postmodern science fiction is that writers focus less on scientific and technological achievements of humans in space or laboratories, and more on the effects of those achievements on humanity.

2.5. Post-war American Science Fiction: Factors of International Dominance

Although the period of Campbell and Astounding was generally labelled the Golden Age of science fiction with the establishment of the genre as a widely popular and potent category of American literature, it was arguably the post-war era that witnessed the international dominance of American science fiction with the location of most of the magazines and book publishers in the United States and the association between science fiction and American culture of the post-war decades which had considerable influence on the spread of the American model in America and abroad before even the revival of British science fiction in the 1960's. Therefore modern science fiction since 1945 was primarily an American phenomenon, and much of the genre was written either by Americans or by authors who adopted the American idiom. This dominance was the product of various related factors which include mainly the English language that became the world language of literature and science and many other fields after the war and the geographical concentration of writers, publishers and readers in America including even foreign writers and immigrants. More important was the process of dynamic social and economic change that moved through American society feeding new perspectives and arousing interest in the future. Apart from the negative and positive effects of this process of change, the American society of the post-war decades was a society of all opportunities and which welcomed new technology, which enjoyed novelty with a strong curiosity about the prospect of more change, and which was looking for more expansion and more success. It was within this environment that science fiction developed into an American model to be exported and imitated all over the world. It is then worth exploring the major factors lying behind the creation of this unique model and its international dominance.

Since the founding of the genre in the nineteen-twenties, science has been the guiding force of science fiction, and for many decades science fiction writers formed a large community cut off from the mainstream literary culture by their outspoken support for the values of science and technology. Science and technology have always been the key to progress and have always represented society's investment in its own future. It was this concern about the future that made and still makes science the core and centre of the science fiction field. Even in its moments of rebellion against science and technology, science fiction has continued to be moulded and shaped by scientific thought, and more important than detailed correctness is the imaginative debt which science fiction writers owe to scientific outlook with its experimental and rigorous spirit. In his essay *"Running Out of Speculative Niches"*, David Brin asserts that "Science itself is a major character" (Quoted by Cramer and Hartwell 1994: 81), and in an essay titled "Is There a Technological Fix for the Human Condition?" Gregory Benford states,

> *It is not enough to merely use science as integral to the narrative. Science fiction must use science in a speculative fashion. The physical sciences are the most capable of detailed prediction so they are perceived in fiction as more indicators of future possibilities, or stable grounds for orderly speculation (Quoted by Cramer and Hartwell 1994: 81).*

Science fiction has also been able to reciprocate in the sense that many of the most fascinating ideas in science originated not in laboratories but from the minds of imaginative science fiction writers such as rocket ships, computers, space travel, and genetic transformation. Science fiction historian and writer James Gunn observes that, "Many inventions, Buck Rogers's backpack rocket to robots, lasers, computers, have first been described in science fiction stories. But the literature owes an equal debt to science, from which it drew not only inspiration but many of its ideas" (Gunn and Bly 2005: 1). Predictions made in science fiction were of two kinds; those which

were later achieved by scientists such as man-landing on the moon, rocket ships, bionics, and cloning, and those which are not likely to be achieved, they are not technologically feasible, and they are still considered mere fantasy such as time travel and teleportation. This interaction between science and science fiction can be detected from the fact that several generations of scientists and engineers have grown up reading science fiction, and later in life became science fiction writers such as Gene Wolfe, Carl Sagan, and Isaac Asimov, and many of the most prominent figures in the field have scientific backgrounds and held degrees in various scientific fields such as Heinlein (engineer), James Blish (biologist), Larry Niven (a degree in mathematics), Kurt Vonnegut studied mechanical engineering, and Vernor Vinge (professor of mathematics and computer scientist).

Although some kind of science fiction flagrantly violates scientific rules and has very little to do with scientific thought and theory, it still keeps those virtues of experimentation and speculation that it derives from its unique relationship with science. In this respect, Kathryn Cramer argues that

> *Writing stories within the rules of the universe as we know it and yet discovering fantastic possibilities of new ways of life is the central endeavour of the science fiction writer. Physical law tells us that many things are impossible given existing technology, but the ever-expanding frontier of scientific knowledge shows us how to do many things of which we would never have dreamed (Cramer and Hartwell 1994: 81).*

Cramer reinforces the belief that truth is sometimes stranger than fiction, and this was perhaps the case for the post-war decades in the United States when science and technology played an even more important role in the growth and spread of American science fiction in America and in many countries around the globe. The United States was thought of as an inherently dynamic society which already represented the future. More than in any other country in the world after the war,

scientific progress and technological development were more immediately put in the service of consumer-oriented capitalism that the focus was directed toward modernising all aspects of industrial production and the extension of scientific management into even the control of human life and human behaviour. In fact, science grew more complex and harder to grasp and all the technological breakthroughs of the post-war era demonstrated that the gap was being bridged between science fiction and science fact. There had been intense research concerning many aspects of life and the universe, and many inventions and discoveries were successfully made in various fields including astronomy, medicine, biology, physics, and chemistry. Such revolutionary achievements include DNA structure, Einstein's General Field Theory developed during the 1960's in theoretical physics in what is called the Golden Age of general relativity, the first hydrogen bomb, satellite communications, the spread of the nuclear power to various fields especially the military, high-speed rocket planes, and the launching of the space programme.

There is no doubt that these revolutionary developments had a great impact on the imagination of science fiction writers with the vision of evolution beyond man which was usually presented in the form of a wholly artificial environment where the inheritors of human civilisation will be organisms with artificial brains or machines that will liberate themselves from their human constructors. In addition, the prospects of space travel, an old dream of mankind, had become real and practical with the launching of the space programme and this encouraged American science fiction writers to engage into speculation about future possibilities of discovering some mode of faster propulsion to colonise and inhabit other planets. In fact, after winning the war and achieving unprecedented economic and technological progress, space became a new frontier in the American imagination and the ultimate target of

America's drive towards perpetual expansion. More important than the myth of the frontier inherent in American culture and politics was the idea of survival when the Earth will no longer be able to support human life and when enforced migration to other planets will be the only alternative. Facing the choice of embarking on space travel and leaving the Earth or becoming extinct because of some man-made disaster makes any further development in space travel appear as a positive form of evolutionary adaptation that was imaginatively highlighted in American science fiction of the post-war era.

On the other hand, the increasingly pervasive influence of science and technology on human life and more particularly the government and military control of the scientific research have been since the end of the Second World War the major concern of American science fiction writers. It was that concern about the future of humanity that made American science fiction go into the lead becoming an object of attention for readers and scholars who were seeking an adequate understanding of the radically complex world they were living in. Science fiction critic Veronica Hollinger describes the situation:

> *Developments in technoscience are rendering our lives more and more science-fictional, and the case has often been made that the term science fiction now refers not only to a popular narrative genre, but also to an increasingly widespread mode of cultural description and analysis. Science fiction has become an aspect of the quotidian consciousness of people living in the post-industrial world, daily witnesses to the transformations of their values and material conditions in the wake of technological acceleration beyond their conceptual threshold (Hollinger 2005: 233).*

The term "technoscience", coined by Belgian philosopher Gilbert Hottois, was first used in the 1970's by science critics such as Bruno Labour, a French sociologist of science, as a concept which suggests that the distinction between pure traditional science and applied technology no longer holds, and that many knowledge fields

have become trans-disciplinary with scientific practice intertwined with power represented by transnational capitalism and politics. Technoscience, which was intended to describe the new environment of the post-war decades, has become more a political and cultural practice that lost much of the objective and neutral values that had once characterised pure science.

Government and military control of scientific research became a distinctive feature of the Cold War period when the whole society was really threatened by the possibility of nuclear extinction. The result was that science fiction writers became increasingly active in politics and became embroiled in the post-war controversy which revealed the extent to which scientific research was subject to political and military exploitation. As soon as the label Cold War was applied to the conditions of the post-war era, it became a metaphor for science fiction writers whose writings were rapidly degenerating into political allegory. Indeed, the typical urgencies of the period and more particularly the fear of nuclear war affected the writers' perceptions of the changed status of science fiction which became more serious, more respectable and more expressive of the fears and traumas inherent in that age. Isaac Asimov dated the shift precisely: "The dropping of the atomic bomb in 1945 made science fiction respectable" (Asimov 1970: 93), and James Gunn affirmed that, "from that moment on thoughtful men and women recognised that we were living in a science fiction world" (Gunn 1975: 174). Certainly war period stories such as Cleve Cartmill's "Deadline" (1944) and Robert Heinlein's "Solution Unsatisfactory" (1941), which had already described the A-bomb and predicted a state of threatened peace, gave more credibility and force to science fiction that was so quick to engage with the Cold War and the entailments it carried. Science fiction scholar Thomas

Alan Shippey describes the new status of science fiction during the Cold War period by stating that science fiction writers

> *like weighing speculating possibilities… they could feel that the world was at last conforming to their notions of how things ought to be, with the scientist firmly established at the top of the totem pole and politics calculable in terms of research and development. Besides, many years of painful scorn for the fantastic element in science fiction were being most satisfactorily repaid… That showed science fiction had to be taken seriously (Shippey 1979: 93).*

Therefore, atomic doom stories began appearing in the magazines less than a year after the destruction of Hiroshima and Nagasaki as a response to a whole range of social, technological and political changes taking place during the Cold War period. While some writers like James Blish concentrated on the apocalyptic and cataclysmic end of the world through a nuclear disaster, others like Robert Heinlein and Judith Merril rejected the fatalism of total nuclear destruction and tackled instead the issue of survivalism by insisting that the nuclear war would bring about a radical transformation of society. The wide range of stories about nuclear war and post-nuclear nightmares published during the post-war period led H. L. Gold, the editor of Galaxy, to complain that too many stories "still nag away at atomic, hydrogen and bacteriological war, the post-atomic world, reversion to barbarism, mutant children, world dictatorships, problems of survival… war, more war, and still more war" (Gold 1952: 2).

Moreover, stories dealing with Cold War fears and anxieties revolve around not only nuclear holocaust and its consequences but also the conditions inherent in that age and the overlapping issues of arms race, espionage, fears of foreign attacks and invasion, and the rise of totalitarianism. In reality, the Cold War made permanent many of the features of World War II's warfare state, and these included a technologically sophisticated military supported by an industrial-scientific complex,

large state intelligence agencies (CIA and FBI) with both international and domestic activities, and a clearly defined enemy (the Soviets) that possessed the power and ideology to challenge an American vision of world order. Therefore, arms race was immediately launched trying to achieve the technological lead by constructing the most sophisticated weapons especially after the explosion of the first Soviet H-bomb in 1953 which heightened fears further and opened the way for more horrific speculations. In fact, Americans remained largely ignorant of the horrors of nuclear war because the American government maintained an extremely restrictive and even repressive control of the dissemination of such information and of any nuclear-related images, and much of what Americans learned about the impact of nuclear holocaust had to come from science fiction. Thus, it is not surprising that many of the most important science fiction works of the Cold War period dealt with the possibility of a nuclear disaster and its aftermath, and among the most famous of these works are George R. Steward's *Earth Abides* (1949), Judith Merril's *Shadow on the Hearth* (1956), Bernard Wolfe's *Limbo* (1952), Mordecai Roshwald's *Level 7* (1959), Pat Frank's *Alas Babylon* (1959), Walter Miller's *A Canticle to Leibowitz* (1959), Philip K. Dick's *Dr. Bloodmoney* (1965).

In addition to the nuclear weapons, the computer was another technological device that increased the fear of loss of control in a state of extreme tensions. The first US computer ENIAC was set up in 1946 for ballistic research; it was sponsored by the American military and used by the army for calculating artillery-firing tables and for target accuracy. Some science fiction writers of the period have drawn on the computer's potential for horror and destruction including Harlan Ellison in "I Have no Mouth, and I Must Scream" (1967) which is about the super-computer AM that brought about the genocide of almost all of humanity and Poul Anderson in "Sam

Hall" (1953) which extrapolates the fear of a central data bank on citizens during the McCarthy period when everyone's loyalty is checked. Besides, American writer John Harvey Wheeler, best known as co-author with Eugene Burdick of Cold War novel *Fail-Safe* (1962), confirmed that

> *With the world brought under continuous surveillance operations, capable of pipping masses of strategic information into real-time computer analysis systems, the military prospect is for the advent of an age of pre-emptive warfare, triggered and directed by computer (Wheeler 1968: 107).*

Another facet of the Cold War that found echoes in American science fiction was the war of information so that the restrictions on any material relating to technological research and military industry became even tighter after the wartime control when the post-war security agencies were established. Secrecy became institutionalised in mechanisms of control and espionage was part of the game to gain technological lead in weapons research and industry. This state of affairs explains the long-standing phobia in America over nuclear security and the arms race to the extent that intellectuals and scientists themselves responded to the growth of the military-industrial-scientific complex and some of them, like J. Robert Oppenheimer (the father of the atomic bomb) and the Rosenbergs, became victims to the rising tide of anti-communist hysteria –the Rosenbergs were executed and Oppenheimer was tried and convicted. In his history of the atomic scientists ***Brighter than a Thousand Suns*** (1956), Robert Jungk, an Australian writer who wrote mostly on issues relating to nuclear weapons, records a conversation with a scientist at Los Alamos Laboratory, New Mexico, in 1949 in which he said,

> *My whole youth was absolutely devoted to truth, freedom and peace; the truth that I am trying to discover is locked behind massive gates; and yet fate has seen fit to deposit me here where my freedom of movement is limited, and the ultimate aim of my work has to be the construction of the most hideous weapons of war (Quoted by Parrinder 1979: 81).*

Those scientists who were capable of furthering weapons research for gaining technological superiority and reinforcing "national security" were quite valuable brains, but they could be also treacherous and disloyal. Indeed, the war during the post-war years was a war of "brains" (scientists) that were treated as objects holding valuable information and it was quite legitimate to reify characters so that they become indistinguishable from the information they carry. A good illustration of the role scientists played in this war comes in a Cold War story about technology and espionage by the British science fiction writer Eric Frank Russell titled ***With a Strange Device*** (1964), in which a character says, "In this highly technological age, the deadliest strike one can make against a foe is to deprive him of his brains, whether or not one acquires them oneself" (Quoted by Shippey 1979: 94). Historically, the contribution of German scientists who emigrated to the United States during and after the war, such as Einstein, Otto Robert Frisch and Wernher Von Braun, was very important and there was a belief that the Soviet A-bomb of 1949 came from the same source. Meanwhile, there were also Western traitors, such as Klaus Fuchs, David Greenglass and Alan Nunn May, who spied for the Soviet Union supplying information from the British and American atomic and hydrogen bombs research and who were later tried and convicted. Given such conditions, the information war and the fear of losing nuclear monopoly in spite of increasing secrecy turned in the United States into a nation-wide phobia that was depicted in many science fiction stories that treated the themes of espionage, security, conspiracy and treason. The most famous of these stories are Wilson Tucker's ***Wild Talent*** (1954), Poul Anderson's "Security Risk" (1957), Ernest Kenyon's "Security" (1956), Cyril. M. Cornbluth's "Gomez" (1954), and Algis Budrys's ***Who?*** (1958) in which

the narrator comments, “The war was in all the world’s filing cabinets. The weapon was information” (Quoted by Seed 1999: 10).

In addition to the threat of nuclear holocaust and the feverish and frenzied arms race, the fear of communist infiltration and subversion was rampant in 1950’s America and evolved into a mass hysteria and a panic fed by unscrupulous politicians like Senator Joseph McCarthy whose committee’s congressional hearings and blacklists affected deeply the cultural and intellectual life of the nation and the lives of all people caught up in them. In fact, by launching a hunt for domestic spies and suspected communists serving foreign powers, the inquisitors pursued their prey into all organised American institutions for the purpose of preserving a perpetual national security. The result was that Americans avoided controversy and became social conformists for fear of getting into trouble by taking part in political activities. It was in that climate of conformism and McCarthyite fears of internal subversion that Soviet attacks on the United States and occupation were imagined with popular dystopias and a series of science fiction narratives dealing with both the rise of totalitarianism and the communist take-over of the country. The most interesting of such stories comprise essentially Ray Bradbury’s *Fahrenheit 451* (1953), Jack Finney’s *The Body Snatchers* (1955), and Cyril. M. Cornbluth’s *Not This August* (1955). Then it is commonplace that post-war American science fiction reflected all the latent anxieties and changes inherent in the Cold War period, and the Cold War provided in parallel the genre with unprecedented popularity and international respectability. This close relationship between the Cold War and science fiction led eventually to the development in the 1980’s of what was called “nuclear criticism” named later by the Australian Kenneth K. Ruthven in his book *Nuclear Criticism* (1993). Though it was not a critical school and was a short-lived trend, it has given

priority to the study of the apocalyptic paradigm in nuclear science fiction literature and has opened a discussion of how writers attempted to locate the experience of nuclear disaster. In this category of works, which include among many others David Dowling's *Fiction of Nuclear Disaster* (1987), Martha A. Bartter's *The Way to Ground Zero: The Atomic Bomb in American Science Fiction* (1988), and Paul Brian's *Nuclear Holocausts: Atomic War in Fiction* (1987), critics attempted to examine how the possibility of a civilisation-ending nuclear war affected the production and reception of science fiction literary texts, and argued that scholars should reflect this in their research. Besides, the field saw the foundation in 1988 of the journal *Nuclear Texts and Contexts* by the International Society for the Study of Nuclear Texts and Contexts in Washington State University which continues to provide an important and crucial forum for critical debate.

On the other hand, after the vogue for realistic novels of nuclear catastrophe and the spread of the counter-culture movement in the 1960's, the generation of science fiction writers known as the New Wave began to exploit post-nuclear nightmares as a way of expressing the psychological impact of uncontrolled change in society on the individual by concentrating on the individual psyche as the key social unit. Indeed, the counter-culture movement exercised a deep influence on American science fiction which allowed the export of American culture of that tumultuous period to the rest of the world, and succeeded to gain more attraction and popularity on the international literary scene.

A much more important factor in the world-wide dominance of American science fiction of the post-war decades was the extraordinary development of American science fiction cinema which was basically centered on the conditions of

the Cold War period and which boomed during the 1950's when Hollywood's major studios as Universal, Warner Bros and Paramount dabbled in the genre bringing to fame the names of such producers as George Pal, Roger Corman, Jack Arnold, and John Frankenheimer. For many years the focus of early science fiction cinema was on fantasy and horror films which were produced especially during the 1930's dealing with disaster, space opera, and mad scientists. The mostly remembered of these films are *The Last Man on Earth* (1924), *Things to Come* (1936), *Frankenstein* (1931), *The Invisible Man* (1933), *Deluge* (1933), and *Lost Horizon* (1937), and some were adaptations of science fiction novels by authors such as Mary Shelley and H. G. Wells. While the 1940's were almost empty years and there was little noteworthy cinema in the field, the 1950's witnessed a science fiction movie boom centered in the United States, and it was George Pal's *Destination Moon* (1950) which was believed to announce the start of a genuinely American science fiction cinema that has continued to dominate the world ever since.

It is, in fact, beyond the scope of this limited space to attempt a full exploration of science fiction cinema in the United States in the post-war decades. However, this overview should provide an understanding of the role played by science fiction cinema in making the genre in both novel and film the most influential American cultural phenomenon in the modern world. In spite of the fact that science fiction films of the period suffered low and shrinking budgets, bad scripts, and simple and cheap special effects compared to computer-generated effects, science fiction movie boom of the 1950's was made up of a series of films that hit the screens and were mostly popular. Keith Booker asserts that,

> *There are good reasons why the decade is often thought of as a sort of Golden Age of science fiction film. In terms of sheer numbers, there were more science fiction films produced in the 1950's than in any decade before*

> *or since. In addition, the science fiction films, however conservative, often explored the Anxieties of the decade in ways that more mainstream films were not able to do within the paranoid political climate of the period (Booker 2001: 107).*

Given the political climate of the post-war period, almost all science fiction films of the 1950's concentrated on the Cold War metaphors by typically stressing the themes of nuclear holocaust, anti-communist hysteria, and the fear of the dehumanising consequences of life in the modern world. In fact, the decade's fascination with science and technology was associated with a variety of paranoid fears that were apparent in a number of recurring tropes including space travel, alien invasion and attacks by exotic monsters or radioactively generated monsters, mutants and giant insects, the military-scientific collaboration, and scenes of mass destruction, all in a way that managed to address the concerns of Americans during the Cold War period.

In the field of space travel, films depicting the exploration of outer space were rare in the decade because of technical and budgetary difficulties, and in the few films dealing with space, the worlds depicted seem more Earth-like and were not totally convincing. However, space films of the 1950's were intended to depict the increasingly insane competition between the United States and the Soviet Union in their blind pursuit of technological lead and superiority. The most popular space films of the period include *Destination Moon* (1950), *Rocketship X-M* (1950), *When Worlds Collide* (1951), *Conquest of Space* (1955), *Forbidden Planet* (1956), *This Island Earth* (1955), and *Earth vs. the Flying Saucers* (1956).

On the other hand, political paranoia was very strong in science fiction cinema with the Cold War being at its height and Hollywood itself becoming a subject to investigations designed to weed out left-wingers. Thus, the most common 1950's film treatments of the dangers of nuclear disaster and Soviet attacks were alien

invasion films displaying excessive violence which was generally used as a metaphor for the irrational forces which Americans feared might threaten their lives such as nuclear weapons and invasion. The special anxieties of the decade and the anti-communist hysteria seemed more serious as themes in science fiction films of the 1950's and were depicted in such apocalyptic and post-apocalyptic films as *Red Planet Mars* (1952), *I Was a Communist for the FBI* (1951), *The Thing from Another World* (1951), *The Man from Planet X* (1951), *The Day the Earth Stood Still* (1951), *Invasion USA* (1952), *Invaders from Mars* (1953), *Invasion of the Body Snatchers* (1956), and *War of the Worlds* (1953, based on Wells's novel but updated and Americanised to reflect the concerns of the decade), and in these films invaders and aliens are often identifiable as metaphoric standing for communist agents either coming from the outside or from the American society itself. In this context, what was frightening and disturbing in 1950's America was when the difference between aliens (enemies) and humans (Americans) was extremely small or almost inexistent. According to Keith Booker,

> *This was particularly true in the 1950's, when America's most frightening enemies were communists, who did not necessarily look any different from "normal" Americans and who, according to such sources as Senator Joseph McCarthy, had already infiltrated American society to an astounding context (Booker 2001: 121).*

By portraying the inherent fears and political paranoia of the Cold War period, science fiction films of the 1950's clearly demonstrated Hollywood's ideological orthodoxy in the midst of the communist witch-hunts of the period which had already identified the film industry as a convenient target. Indeed, the atmosphere reflected the intellectual conformism that reigned in the film industry of the 1950's although certain films such as *Five* (1951), *The 27th Day* (1957), *The Day the World Ended* (1955), and *On the Beach* (1959) have been interpreted by critics as left-wing

making of fantasy content a cover or a frame for discussion of many real issues which were hardly open to serious consideration in other popular medium. For instance, science fiction expert Peter Biskind claims that, "In the difficult climate of the 1950's, the genre of science fiction provided freedom for uncompromising left-wing statement because it was so thoroughly removed from reality" (Quoted by Booker 2001: 133). Actually, fantasy elements served too much science fiction during that period, but fantasy has also been recognised as an essential part that has provided the genre with more fascination and the quintessential element of the sense of wonder, and as Thomas Alan Shippey notes, "Reality and fantasy intertwine; without that intertwining science fiction would have lost half its fascination" (Shippey 1979: 94).

More typical of the turn science fiction films took during the 1950's was the adoption of horror and the gothic traditions which helped to trigger a spate of big-monster movies that tended more toward science fiction and less toward pure fantasy of the previous decades. Alien invasion films and monster movies were closely related and overlapping sub-genres, both growing out of the anxieties of the period and the fear of human annihilation. Film historian Carlos Clarens notes that "These anxieties often played out in attacks of monsters on human beings, especially attacks of monsters from outer space, because things from other worlds offer unlimited variety as creatures of horror" (Quoted by Booker 2001: 139). These horror-monster movies dominated the long 1950's after the phenomenal success of *King Kong* (1949, reintroduced in 1952), and they generally address the nuclear tensions of the 1950's and the McCarthyite anti-communist witch-hunts which were at their peak by drawing upon fears that nuclear weapons might somehow activate "primitive forces", as called by Keith Booker, like giant monsters. In this sense, earth-grown monsters

tended to have slightly different implications than monsters that invaded the Earth from outer space. While the first represented the horrific consequences of radiation and nuclear experiments and tests, the second stood for the anti-communist hysteria and the fear of Soviet attacks that informed American attitudes during the Cold War period. This category of films includes *Lost Continent* (1951), *The Beast from 20.000 Fathoms* (1953), *It Came from Beneath the Sea* (1955), *The Monolith Monsters* (1957), and *The Blob* (1958). Meanwhile, insects were widely used as a symbol of the dehumanising consequences of life during the Cold War period, and the ants seemed particularly to provide the perfect metaphor for Soviet communism and Soviet attacks. These insects were made huge and giant creatures as a result of radiation and fallout from nuclear bomb tests, and they appeared in such films as *Them* (1954), *Attack of the Crab Monsters* (1957), *The Black Scorpion* (1957), and *Beginning of the End* (1957).

Although other nations, primarily the UK and Japan, continued to produce science fiction movies from the 1960's onwards, the United States reasserted its dominance in the field and American science fiction films of the 1960's began to deal more directly with nuclear holocaust and to criticise more openly the anti-communist hysteria, and also to express the widespread fears that Americans were becoming servants of their technology. In addition, American science fiction films of the decade resonated strongly with counter-cultural concerns about such issues as American invasion of Vietnam, nuclear weapons and arms race, and about domestic politics of the civil rights, women's movements, and youth politics. These concerns provided the genre with a new sense of relevance and helped to produce memorable films that include *Panic in Year Zero* (1962), *The Manchurian Candidate* (1962), *Dr. Strangelove* (1963), *Fail-Safe* (1964), and *Seven Days in May* (1964). Besides, spy

movies like *You Only Live Twice* (1967) were immensely popular in the 1960's reflecting a society riddled by secrets and conspiracies as a result of the Cold War conditions and mentality. It is also important to stress that the year 1968 was crucial in the history of American science fiction cinema with the great number of films produced including the most famous and popular *Night of the Living Dead*, *Planet of the Apes*, *Countdown*, *The Lost Continent*, *Wild in the Streets*, and finally came *2001: A Space Odyssey*, one of the great classics of the genre which demonstrates a dark vision of technology and which allowed testing the new technical developments in filmmaking. Actually, given the huge success of American science fiction from the end of World War II onwards, it is eventually fair to say that genre science fiction in the United States owes too much to the film industry that provided the genre with a worldwide acceptance and popularity and allowed the USA to reassert its dominance in the field and therefore to export its own culture as well as its own controversies to the rest of the world and to maintain its own view of world order.

Conclusion

In spite of its short history, the success of American science fiction during the post-war decades was the result of the various factors already discussed, and if it came to sweep the international scene as one of the most widely popular literary genres in the modern world, it was not only with its iconic figures in both novel and film who became idols for modern fans and readers or its themes that have explored the urgent concerns of humanity about the future, but it was incontestably with its iconic characters that have become distinctive symbols of the genre. In fact, the presentation of characters in American science fiction and more particularly in the post-war era is perhaps one of the issues that requires thorough consideration and

deeper analysis for the wide range of character types involved and the wide variety of dimensions they embody in science fiction stories. If human beings constitute part of science fiction narratives as characters, they are not the only ones and their presentation might even be seen as different from that in the mainstream novel. Taking not only the planet Earth but the whole universe as its province and taking speculation about the future as its doctrine, science fiction has come with an extension in the range of characters including, in addition to humans, such figures as robots, automatons (androids, cyborgs), mutants, supermen, and aliens. Thus, in the following chapters I attempt to examine a series of works by the leading American science fiction writers of the post-war decades for a comprehensive study and exploration of the presentation of characters in American science fiction of the period and of the extent to which these characters expose a unique model of characterisation in the history of modern fiction.

CHAPTER THREE

Humans, Robots, and the Environment in Isaac Asimov's Robot Novels

Introduction

3.1. Isaac Asimov: The Master of Modern American Science Fiction

3.1.1. Life and Career

3.1.2. Asimov's Robots and the Laws of Robotics

3.2. ***The Caves of Steel***

3.2.1. Summary

3.2.2. Human versus Robot

3.2.3. Environment as Character

3.3. ***The Naked Sun***

3.3.1. Summary

3.3.2. The Role of Robots and the Circumvention of the Laws of Robotics

3.3.3. Baley and Gladia versus the Environment

Conclusion

CHAPTER THREE

Humans, Robots, and the Environment in Isaac Asimov's Robot Novels

Introduction

A presiding genius and master of American science fiction, Isaac Asimov is widely recognised as one of the "Big Three" science-fiction writers during his lifetime along with Robert A. Heinlein and Arthur C. Clarke (Freedman 2000: 71). Although he built himself a reputation outside the science fiction ghetto by increasingly concentrating on science popularisation from the 1950's onwards, he always remained faithful to science fiction writing until his death, and he had been proud of his career as a science fiction writer through which he revolutionised the genre by providing the basis for many of its present characteristics. Because of his scientific background -a professor of biochemistry- and his interest in many other branches of science, Asimov was a strong believer in the advantages of science and technology and his beliefs have been mostly noted in his science fiction works. His most influential contribution to modern science fiction was the invention of the field of robotics and the conception of the positronic brain for robots and the incorporation of robots as important and fully developed characters in his celebrated robot stories and novels long before the scientists began researching (certainly inspired by his books) how to bring the mechanical man or humanoid to conscious and intelligent life. Since the time of Asimov, robots have acquired new dimensions and have become a staple of modern science fiction that many science fiction writers began to use in their stories. Therefore, the study of robot characters and the interaction between robots and humans in Asimov's robot novels is the focus of this chapter.

3.1. Isaac Asimov: The Master of Modern American Science Fiction

3.1.1. Life and Career

Isaac Asimov was born on January 2, 1920 to a Jewish family in Petrovichi, Russia (a village in Byelorussian Soviet Socialist Republic during the Soviet times), and when he was three his parents migrated to the United States where he became a US citizen in 1928. Isaac Asimov grew up in Brooklyn, New York, where his parents owned a candy and magazine store which played an important role in his writing career, and it was while working in the store that he acquired the addiction to science fiction through the pulp magazines his parents were selling. When the young Asimov was not helping in selling -which he did for many years even into the college years- he spent time to read and he was greatly attracted by the brightly coloured pulp magazines with their cover paintings of futuristic machines, planets and aliens which filled his imagination with new ideas and dreams. Asimov began writing his own stories in his late teens selling them to pulp magazines and using the money to finance his education. In 1939 Asimov graduated from Columbia University, majoring in chemistry, and his first published story "Marooned Off Vesta" appeared in the same year in Amazing Stories, but Asimov was hoping to break into Campbell's Astounding Science Fiction which had the most prestige. Meanwhile Asimov joined the science fiction fan group the Futurians and met Frederik Pohl who helped him publish a number of stories in Astonishing Stories and Super-Science Stories including "Strange Playfellow" (later retitled "Robbie") which was the first of his Robot stories. After many rejections, Campbell finally accepted Asimov's story "Trends" to be published in Astounding in July 1939, beginning a long and fruitful relationship that allowed Asimov to gain fame and popularity in the science fiction field. It was Campbell who published the bulk of Asimov's output throughout

the 1940's with which he made his first true mark on science fiction. Through the 1940's Asimov became a valued member of Campbell's stable of writers which included such big names as Robert A. Heinlein, Jack Williamson, L. Sprague De Camp, and Van Vogt, and he produced the two series of stories that form the pillars of his science fiction reputation and which dominated the field in the forties and fifties, the Robot stories and the Foundation series. After the publication of "Robbie", Asimov worked out the Three Laws of Robotics which governed his positronic robot stories ever since and which determined what robots could and could not do in much science fiction written afterward. The early Robot stories include "Liar!" (1941), "Runabout" (1942), "Reason" (1941), "Escape" (1945), and "Evidence" (1946) which reappeared in the famous 1950 collection ***I, Robot***. In 1941, Asimov wrote "Nightfall", about the response of an alien society on an all-time illuminated planet to the coming of darkness and the first appearance of stars, which was described by many critics as the single most famous science fiction story of all time and which was voted by the Science Fiction Writers of America in 1968 as "the best science fiction short story ever written" (Clute 1999: 57). Although with "Nightfall" Asimov was accepted as a major figure in the science fiction field at the age of twenty-one, the most important step in the development of his career was the Foundation series on which he worked until 1950. In 1941, he began publishing the first instalments of the celebrated Foundation series which recount the fall and rebirth of a vast Galactic Empire, inspired in part by the decline of the Roman Empire. The stories, set thousands of years in the future, detail a time after the collapse of the mighty Galactic Empire plunges the Galaxy into a new Middle Ages, and reflect the beneficial effects of science and technology in making these new Dark Ages as brief as possible. The stories were most famous for their postulation of a

science of history called psychohistory -a fictional science based on the prediction of future trends in history through mathematical analysis- that would reduce the intervening years of barbarism from thirty thousand years to one thousand. The Foundation series was originally eight stories published in Astounding throughout the 1940's that were later shaped into three novels that subsequently became the Foundation Trilogy: *Foundation* (1951), *Foundation and Empire* (1952), and *Second Foundation* (1953). Grandiose in conception, the trilogy became a landmark in American science fiction and won a Hugo Award for Best All-Time series in 1966 and Asimov's Galactic Empire became a template for almost every future history generated in the field from the 1940's onwards. In addition, it was with the Foundation series and the invented science of history along with the Robot stories and the invented Laws of Robotics that Asimov's name would be most associated for the following half century making him a science fiction celebrity of the first rank.

Asimov's personal life was also changing rapidly during the 1940's. He had earned his M.A. in chemistry in 1941, but he had to suspend his studies during World War II to be a junior research chemist in the US Naval Air Experimental Station at the Philadelphia Navy Yard where L. Sprague De Camp and Robert Heinlein also worked. After the wartime hiatus, Asimov returned to his studies at Columbia and he finished his Ph.D. in 1948 and he joined in the following year the Boston University School of Medicine where he became associate professor of biochemistry, a position he resigned in 1958 to return to full-time writing. However, Asimov retained the title of associate professor and in 1979 he was honoured by the university for his writing by promoting him to the rank of full professor of biochemistry.

After Campbell's desire to force his own ideas on him, Asimov decided to reach out to other editors in the field especially Horace Gold of Galaxy who published his novel *The Caves of Steel* (1953) in the magazine (published in book form in 1954). Thus the 1950's could be referred to as Asimov's golden decade for the great number of science fiction works he produced during that period. Most of the best of his short stories like "The Martian Way" (1952), "The Deep" (1952), "Dreaming in a Private Thing" (1955), and "The Dead Past" (1956) came from the 1950's and they were assembled with many other stories in a series of impressive volumes including *The Martian Way and Other Stories* (1955) and *Earth is Room Enough* (1957). During the same period, Asimov wrote a sequence of six juvenile science fiction stories called the Lucky Starr novels under the pseudonym of Paul French including *David Starr, Space Ranger* (1952), *Lucky Starr and the Pirates of the Asteroids* (1953), and *Lucky Starr and the Rings of Saturn* (1958). However, Asimov's first published novel of the decade was *Pebble in the Sky* (1950), set earlier in the Galactic Empire of the Foundation stories but has no direct connection with them, followed by two other novels in the same universe: *The Stars, Like Dust* (1951) and *The Currents of Space* (1952). Asimov returned to the universe of robots with *The Caves of Steel* (1954) and *The Naked Sun* (1957) in which he created the most memorable characters rarely found in his work or in modern science fiction. In 1955, he published one separate singleton *The End of Eternity*, a complex story of time travel and time paradoxes, after which he abandoned writing fiction and shifted his interest to non-fiction and more particularly to science popularisation after the launching of Sputnik I by the Soviet Union in 1957 which revealed a large gap between the USA and Russia in terms of science. In 1958, he began a monthly science column in the Magazine of Fantasy and Science Fiction which appeared continuously until late

1991 and which won him a special Hugo in 1963 for "adding science to science fiction" (John Clute 1999: 57). Besides, Asimov was involved in 1977 in founding the first successful new American science fiction magazine since 1950, *Isaac Asimov's Science Fiction Magazine*, which soon became and remains today one of the dominant journals in the field publishing high-quality science fiction.

During the years from 1958 to about 1980 Asimov's shifting interest in non-fiction resulted in an extraordinary stream of works on all aspects of science (astronomy, physics, chemistry, mathematics, and biology), in addition to works on literature, history, mythology, and the Bible which had all passed the 400 mark. Among his most triumphant works in science that led to his recognition as a major figure in the field of science writing are ***Life and Energy*** (1962), ***The Human Brain*** (1964), *The Intelligent Man's Guide to Science* (1965), ***Asimov on Physics*** (1976), and ***Exploring the Earth and the Cosmos*** (1982). His works in history and literature comprise such remarkable works as ***The Roman Republic*** (1966), ***The Near East: 10.000 Years of History*** (1968), *Asimov's Guide to the Bible* (1981), *Asimov's Guide to Shakespeare* (1970), and *Asimov's Annotated Paradise Lost* (1974). Although most of Asimov's output during the 1960's and 1970's was non-fiction, the break with science fiction was not entirely complete, and he managed to publish over a hundred short stories which appeared in collections such as ***Nine Tomorrows*** (1959) and ***The Rest of the Robots*** (1964), but he wrote only one science fiction novel, ***The Gods Themselves*** (1972), a complex tale about catastrophic energy transfers between alternate universes involving the discovery of the existence of plutonium-186 (it cannot exist in reality), which won him both a Hugo and a Nebula Awards.

To the relief of his numerous science fiction readers and fans, Asimov returned to science fiction writing as a fully active and prolific writer in the beginning of the 1980's, and he began writing novels on a regular basis with *Foundation's Edge* (1982) in which he suggested a merging of his Foundation and Robot series. In fact, no robots existed in the Galactic Empire of the Foundation series, but in the new novels Asimov's attempt was based on a plot that robots might fit into the Foundation universe by having the Three Laws of Robotics that would allow ensuring the survival of humanity among the stars and the preservation of human civilisation in the rising Galactic Empire. So Asimov mentioned robots for the first time in *Foundation's Edge* which was the science fiction publishing event of the year; it won a Hugo Award and it was on the New York Times best-seller list for 25 weeks. Asimov followed up this success with ***The Robots of Dawn*** (1983), ***Robots and Empire*** (1985), ***Foundation and Earth*** (1986), and ***Prelude to Foundation*** (1988) which all constitute with the original series the interconnected Asimovian universe based on two invented sciences, robotics and psychohistory. Besides, the new novels were longer than any other science fiction work Asimov had ever written and they were even more popular that they have inspired other derivative works by well-known science fiction writers such as *Foundation's Fear* (1997) by Gregory Benford, ***Foundation and Chaos*** (1998) by Greg Bear, and *Foundation's Triumph* (1999) by David Brin. During the same period, Asimov began with his wife Janet Asimov a new robot series, the ***Norby Chronicles***, for children from 1983 to 1991, and he wrote more science fiction novels that include ***Nemesis*** (1989), ***Nightfall*** (1990) and ***Child of Time*** (1992) –the last two novels with Robert Silverberg.

In addition to the remarkably large production of science fiction and non-fiction works, Asimov wrote more about himself than any other living author; indeed, his

own life story is told in two volumes of memoirs: *In Memory Yet Green: The Autobiography of Isaac Asimov (1920-1954)* (1979) and *In Joy Still Felt: The Autobiography of Isaac Asimov (1954-1978)* (1980) which are considered along with the late volume *Asimov Laughs Again* (1992) the most extensive autobiographical record yet supplied by any science fiction writer. Asimov's reputation as one of the most influential writers of his era with the impressive quantity and variety of his work and his unusual intelligence allowed him to serve as President of the American Humanist Association from 1985 until his death and to be vice-president of Mensa International, the largest high-IQ Society in the world whose members are those within a high percentile of Intelligence Quotient test results. In addition, Asimov's personal papers are archived at Boston University's Mugar Memorial Library where they constitute a substantial part of the library's collections. And given the sheer volume of his output and his scientific contributions to the development of American science fiction, Asimov was finally given a Nebula Grand Master Award for lifetime achievements in 1987.

Isaac Asimov died in New York on April 6, 1992 after he had suffered heart and kidney failure, but ten years after his death, his wife Janet Asimov revealed in her own edition of Asimov's autobiography *It's Been a Good Life* (2002) that the cause of his death was an infection by HIV, the virus that causes AIDS disease, which he had contracted from a blood transfusion during heart bypass surgery in 1983. Two decades after his death, Asimov's legacy continues with his classic tales and his name has become synonymous with science fiction, and it is fair to say that no one has written more books on more different subjects than Asimov and he has reached a far larger audience in more fields than almost any author in American literary history. For his lifelong achievements, Asimov has been honoured by giving his

name to a crater on the planet Mars, Asteroid 5020 Asimov, and to two literary awards: the Isaac Asimov Award for Undergraduate Excellence in Science Fiction and Fantasy Short Story Writing established by the magazine Asimov's Science Fiction and the Isaac Asimov Award created by the Committee for Sceptical Inquiry (CSE) for his contributions to science and humanity. In spite of his success at many kinds of writing, Asimov never thought of himself as anything but a science fiction writer, and his science fiction books were eventually the ones that have brought him fame and popularity. Asimov has revealed in his memoirs, "No matter how various the subject matter I write on, I was a science fiction writer first and it is as a science fiction writer that I want to be identified" (Quoted by Gunn 1996: 15). John Clute summarises Asimov's career by stating that, "For 50 years it was Isaac Asimov's tone of address that all the other voices of science fiction obeyed, ... For five decades his was the voice to which science fiction came down in the end. His was the default voice of science fiction" (Clute 1999: 58).

3.1.2. Asimov's Robots and the Laws of Robotics

Mechanical imitations of humans and the construction of artificial humanoid beings or automata have a tradition in literature that goes back to the nineteenth century. In fact, the depiction of mechanically constructed men both in mainstream fiction and early twentieth century science fiction had been generally connected with mixed feelings of bewilderment, fear, and superstition. Fear of machines becoming unpredictable and dangerous and evolving until they replace humans appeared as early as Mary Shelley's novel *Frankenstein* (1818) and the part titled "The Book of the Machines" in Samuel Butler's novel *Erewhon* (1872), and soon became commonplace. Although any mechanical construction in the real world is something made by man and governed and controlled by man, it eventually turns out in fiction

that the machine could rule over its master, and that man could face in the not-too-distant future a being of equal quality and a competitor that could even be superior to him. Though there were few stories in which robots appear simply as servants, mechanical men in early twentieth century literature generally develop into negative symbols of the machine age that man is eventually unable to control, and the early examples of such vision are Ambrose Bierce's short story "Moxon's Master" (1909), which was influenced by Poe's "Maelzel's Chess Player", and in which the chess-playing robot becomes violent, seizes his inventor, and finally strangles him to death, and Michael Williams's "The Mind Machine" (1919), in which living computers take over the cities.

During the early decades of the twentieth century, the word "robot" was not known and it first appeared in Karel Capek's play R.U.R. (Rossum's Universal Robots) (1921) which introduced the Czech word "robota" (forced labour or slave) into the language. The play introduces R.U.R., an international company that manufactures machines (robots) that have the qualities of human beings, except that they cannot reproduce themselves, but the robots finally rebel and conquer the human race. Although robots in Capek's play are organic androids (artificial beings of organic origin like Shelley's Frankenstein), the term was usually applied to computerised mechanical constructions in more-or-less human form that would soon become a staple of modern science fiction and a symbol of modern technology. The early pulp-magazine stories about robots with artificial intelligence that behave and think much like humans and that are presented as a threat to humans include Edmond Hamilton's "The Metal Giants" (1926), featuring an atom-powered computer brain that creates an army of 300-foot-tall robots; S. Fowler Wright's "Automata" (1929), in which robots take over all human activities and eventually eliminate the human

species; Harl Vincent's "Rex" (1934), in which the title robot character uses its mechanical brain to create a robot dictatorship; and Robert Moore Williams's "Robots Return" (1938), in which robots discover their origins and start to revolt.

Up to Asimov's time, almost every robot in science fiction turns against its master or against humans in general, and it was against this tradition that Asimov rebelled by showing his strong conservative faith in science and technology which he viewed as the key to human welfare and progress. Asimov was a scientist; his interest in science dictated his method throughout his writing career and his scientific background provided him with a wide range of accurate information on which his inventive imagination largely rested. Asimov was widely known as a rationalist who was intent on convincing his readers and the world to adopt his vision of scientific rationality in dealing with the various problems facing humanity. He asserts, "I continue to write books on science and history and science fiction too in which I try to explain the world in a natural, rationalist way, with the confident certainty that one has but to do that to cause people to abandon their foolish superstitions" (Quoted by Touponce 1991: 2). As an advocate of wisely used science and technology, Asimov demonstrates in his science fiction the triumph of reason or the struggle of reason to triumph over the irrational and emotional responses of people to various situations. In this context, James Gunn stresses that

> *Asimov was a supreme rationalist, a searcher for explanations in his fiction ... As a rational person, Asimov had a compulsion that fit perfectly with what Campbell thought science fiction ought to do: that is to show rationality prevailing over fear, prejudice, sentimentality, short-sightedness, and all the other irrational forces in the world (Gunn 1996: 15, 52).*

As a believer in the advantages of science and technology, Asimov attempted in his science fiction works to provide rational explanations to solve problems and to

counter the archetype of the prejudiced and emotion-driven attitudes and behaviour that have influenced earlier science fiction writings.

Moreover, Asimov's success as a presiding genius of the genre was largely derived from the fact that his science fiction serves a social function and displays a realistic vision that deals with the various problems facing humanity on Earth, and in this sense, Asimov argues that

> *Science fiction is based on the fact of social change ... It tries to penetrate the consequences of this change ... Science fiction is continually lumped under the heading of "escape literature." It is an odd form of escape literature that worries its readers with atom bombs, overpopulation, bacterial warfare, trips to the moon and other such phenomena, decades before the rest of the world had to take up the problems. If science fiction escapes, it is an escape into reality"(Quoted by Patrouch 1978: 2).*

Sharing Asimov's point of view, Robert Heinlein clarifies the idea by stating:

> *Science fiction does have one superiority over all other forms of literature: it is the only branch of literature which even attempts to cope with the real problems of this fast and dangerous world ... In this complex world, science, the scientific method, and the consequences of the scientific method, are central to everything the human race is doing and to wherever we are going. If we blow ourselves up, we will do it by misapplication of science; if we manage to keep from blowing ourselves up, it will be through intelligent application of science. Science fiction is the only form of fiction which takes into account this central force in our lives and futures (Quoted by Brainbridge 1986: 15).*

Science fiction is thus seen as a radical forward-looking social and cultural movement which generates new ideas that the entire society would need in the future, and Asimov's ideas represented perfectly the scientist's world view in an increasingly technological society. He therefore felt the necessity to consider the actual problems, which a lot of people could not see, and to examine the human condition in radically changed environments in the future. James Gunn summarises Asimov's concern as follows: "Asimov was a rational man in an irrational world, puzzled at humanity's responses to change, unable to understand humanity's inability

to see the clear necessity, if it is to survive, to control population and pollution and eliminate war" (Gunn 1996: 19). Against such background, Asimov generated a number of innovations in the field of science fiction that helped transform it away from the space opera adventures of the 1930's into a more intellectually respectable fiction. In fact, Asimov's imaginative universe has greatly contributed to the speculative wealth of science fiction as he presented two invented sciences, robotics and psychohistory, which constitute the cornerstone of his science fiction output.

Of all his creations, his humanly-engineered robot obeying the Three Laws of Robotics was the major contribution Asimov made to genre science fiction as a response to the inherited symbolic image of the mechanical monster derived from the past experience still present in the collective unconscious. Asimov himself said, "If in future years I am to be remembered at all, it will be for the Three Laws of Robotics" (Quoted by Fiedler and Jim 1982: 27). In addition, Asimov's opinions on the advantages of technology, and of machinery in particular, focus primarily on robotics (the word 'robotics' was coined by Asimov in 1941 in his story "Liar"), and he wrote a lot of works in which he presented robots as faithful servants of man. For instance, in *Robots: Machines in Man's Image*, Asimov claims that "robots can be useful in replacing humans in hazardous situations such as in space, in mines, underwater, in explosives factories, in places where one must deal with radioactive substances or new chemicals with uncertain effects" (Asimov 1985: 2002). And in his essay "Robots, Computers, and Fear," he asserts that "The robots will not replace us but will serve as friend and ally in the march toward the glorious future" (Asimov 1984: 10). Therefore, in his science fiction, Asimov stresses the idea of robots being sympathetic, friendly, and helpful, and he openly resented the Frankenstein concept of the mechanical man or the monster figure that ultimately destroys and kills its

creator, and which had dominated science fiction stories of the previous era as a desiccated and dull cliché. In his rebellion against this villainous image, Asimov referred to the unreasoning human fear of robots as the "Frankenstein complex," which he often used as an element in his plots by making much of the narrative in his robot stories focus on the conflict between robots and those who construct and use them on one hand, and the people who irrationally despise and fear them on the other. Asimov clearly states,

> *In my stories, I referred to such fear as a "Frankenstein complex", and this remained a constant element in almost all my robot stories ... Why this fear of robots? In the first place, robots are going to play an inevitable role in advancing technology. Blind, unreasoning resistance to the change is likely to do much harm to the world in general, and to the United States in particular. In the second place, the fear of robots is but a particular case of the fear of technological advance in general –something we can call "technophobia" (Asimov 1984: 1).*

Asimov actually considered the Frankenstein image of robots one of the most unbearable clichés in the field, which he successfully fought and destroyed with the establishment of the Three Laws of Robotics. Early in his career, Asimov began writing stories about a new kind of robots that were engineered to be safe, just as other human-made tools were. Indeed, he conceived his fictional robots as rational and programmable mechanical beings, governed by his Three Laws of Robotics to guarantee they would not harm humans, would obey orders, and protect themselves in that order. In order to ensure that robots would be pro-human in their behaviour and remain helpful servants of humanity, Asimov brought a new contribution to robotics, the "positronic brain", which he defined as "a brain of platinum-iridium sponge with brain paths marked out by the production and destruction of positrons" (Stated by Fiedler and Mele 1982: 30). In physics, the positron is the antimatter particle of the electron whose collision with the low-energy electron results in the

production of an elementary particle called the photon, which is the basic unit of all forms of electromagnetic radiation. When Asimov began writing his robot stories, the positron was newly discovered by Carl D. Anderson in 1932 (for which he won the Nobel Prize in 1936), and Asimov's scientific background allowed him to coin the buzz word "positronic", by analogy with electronic, and he brought the idea of positrons as being suitable material for the construction of an artificial brain with calculated neurotic paths. However, Asimov did not give technical details about the construction of the positronic brain except that they were formed from an alloy of platinum and iridium, and his focus was more on the software of the robots in the form of the Three Laws of Robotics, with which he succeeded to turn round the technophobic Frankenstein myth and to permanently change the nature of robots in science fiction. The Three Laws state that

> *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 Law (Quoted by Clute and Nicholls 1999: 1018).*

All robots in Asimov's stories are equipped with the Three Laws which appear, in Brian Stableford's words, as "a system of ethics" (Quoted by Clute and Nicholls 1999: 1018), and which robots cannot violate without destroying themselves. Therefore Asimov's robots are programmed to be safe and endowed with self-awareness, intelligence, and the ability to consider human well-being in all their actions and behaviour, addressing thus the issue of artificial intelligence long before it became a real technological possibility (the term 'artificial intelligence' was first

coined by computer scientist John McCarthy in 1956 after English mathematician Alan Turing's research on computing machinery and intelligence in the 1940's).

Using the Laws of Robotics as the premise for the conception of the new intelligent humanoid robot, Asimov proceeded to write a series of stories (40 stories over a period of 50 years) and two novels that presented a new vision of the relationship between humans and technology, and provoked inventive speculation on a future technology and its effect on humanity. The most important and famous collection of robot stories which has become one of the enduring titles in the canon of contemporary science fiction and which has elicited much interest from filmmakers in Hollywood was ***I, Robot*** (1950), which contains Asimov's early stories that laid the foundation for the positronic robot. After "Robbie" (published in Super-Science Stories, 1940), which unveils the first robot with rational brain, it was "Liar!" (Astounding, 1941) which contains the first explicit statement of the First Law, and which marked the first appearance of the recurring character of Dr. Susan Calvin, a robopsychologist at US Robots and Mechanical Men Corporation, whose task is to resolve the robots' behavioural problems that arise in various situations in the interaction between robots and humans. Then it was his third story "Runabout" (Astounding, 1942) which stated all Three Laws that governed the production of his robot stories ever since.

The most important thing in Asimov's robot stories is the fact that his positronic brain gives his robots a uniquely human cast; they demonstrate intelligence and self-awareness, and even emotional response, while their benevolent nature is ensured by the respect of the Three Laws incorporated into their brains from the moment of their

construction. The robopsychologist Susan Calvin in the story "Evidence" (1946) explains the good nature of the positronic robot:

> *The Three Laws of Robotics are the essential guiding principles of a good many of the world's ethical systems. Of course, every human being is supposed to have the instinct of self-preservation. That's Rule Three to a robot. Also, every good human being, with a social conscience and a sense of responsibility, is supposed to defer to proper authority; to listen to his doctor, his boss, his government, his psychiatrist, his fellow man; to obey laws, to follow rules, to conform to custom –even when they interfere with his comfort or his safety. That's Rule Two to a robot. Also, every good human being is supposed to love others as himself, protect his fellow man, risk his life to save another. That's Rule One to a robot. To put it simply –if Byerley [Byerley is a lawyer in the story who is suspected of being a robot] follows all the Rules of Robotics, he may be a robot, and may simply be a very good man" (Asimov 1996: 204).*

From this statement, it appears that Asimov's Laws have philosophic implications which have relevance to the behaviour of "good" human beings. Asimov went further by stating, "My robots are almost invariably sympathetic, and if villainous there be (though my stories rarely contain villains –only people) they are human" (Asimov 1984: 10). Even when robots seem more human than man, the Laws are meant primarily to ensure mankind's supremacy and to explore Asimov's vision of how humans and robots might coexist, and to overcome all behavioural dilemmas that might arise. In his work *I, Robot,* Susan Calvin says,

> *There was a time when humanity faced the universe alone and without a friend. Now he has creatures to help him; stronger creatures than himself, more faithful, more useful, and absolutely devoted to him. Mankind is no longer alone ... They're a cleaner, better breed than we are (Asimov 1996: 11).*

Certainly, Asimov's positronic robots and the Three Laws of Robotics revolutionised science fiction in the period of the Golden Age, and provided useful insight of how science and technology might have positive effects on humanity in the future. However, Asimov's revolutionary inventions, which were welcomed and

highly praised by many science fiction writers and critics, were subject to attacks by other critics who saw his Laws as illogical and his dealing with possible defects in the robots' positronic brain as superficial. For instance, Christian Thomsen, in his essay "Robot Ethics and Robot Parody," points out,

> *The basic contradiction is that you cannot construct thinking machines on the one side and laws which forbid certain fields of thinking on the other; and it is here that Asimov fails, and his stories, considered logically, degenerate into nonsense (Thomsen 1982: 24).*

Science fiction writer Stanislaw Lem, on the other hand, notices that "to be intelligent means to be able to change your hitherto existing programme by conscious acts of the will" (Lem 1971:313), and this implies that Asimov's robots cannot act freely, and thereby cannot be qualified as intelligent. Lem concludes his comment by declaring,

> *I have forgiven Asimov many things, but not his Laws of Robotics, for they give a wholly false picture of the real possibilities. Asimov has just inverted the old paradigm: where in myths the homunculi are villains, with demonic features, Asimov has thought of the robot as "the positive hero" of science fiction, as having been doomed to eternal goodness by engineers (Lem 1971: 314).*

And since Asimov was a strong believer in the positive progress of technology, and also in the ethical behaviour of scientists, he proposed in his novel ***Robots and Empire*** (1985) a modification in the First Law which he named the Zeroth Law that states, "A robot may not injure humanity, or through inaction, allows humanity to come to harm" (Asimov 1994: 318). In the novel, Robot Daneel says, "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" (Asimov 1994: 318).

Perhaps as a reply to Lem's criticism, but this modification came to give robots more intelligence and choice to act, not merely in the interest of individual humans,

but in the interest of all humanity; that is to say, a robot must decide whether the possibility of allowing harm to individual human beings can be in service to all humans. Therefore, the robot's brain should be constructed to be flexible so that the robot can pursue difficult problems without being completely inhibited by the Three Laws. In this context, James Gunn remarks,

> *Asimov's basic assumption has always been that scientists would only make robots available to society if they managed to build in sufficient security measures, since if electric wiring without insulation is unimaginable then robots without some form of security system must be unimaginable as well (Gunn 1996: 42).*

In fact, Asimov's depiction of robots in his stories does not show total safety, and by allowing the actions of various robots to contradict with or violate one of the laws, in spite of the precautions taken by engineers in their construction, Asimov creates a case of tension which is then resolved through a logical process that works within the framework of the Robotic Laws. Problems may arise from possible defects in construction or simply when mad scientists might create villainous robots for various malicious purposes. In this sense, Asimov declared,

> *Certainly the stories that really satisfied me and made me feel good about my writing were my robot stories, and virtually every one of them had a situation in which a robot –which couldn't go wrong- did go wrong. And we had to find out what had gone wrong, how to correct it, within the absolute limits of the Three Laws. This was just the sort of thing I loved to do (Quoted by Gunn 1996: 17).*

Moreover, it is worth considering that, in spite of technical failures in the implementation of the Robotic Laws, Asimov was the first science fiction writer who revolutionised the field by resolving complications in the plot with rules instead of violence and weapons, which had characterised most of the pulp-magazine stories of the previous era. Asimov proved in his robot stories that he had a remarkable analytic mind and brilliant thinking so that many critics have attributed to him the merit of

having been the first to use cybernetic ideas in fiction. These ideas related to artificial intelligence and brain simulation did not exist at the time when Asimov wrote his stories, and they began to be considered seriously only in the 1950's. Therefore, it is not an exaggeration to say that the field of robotics as developed in Asimov's fictional worlds was way ahead of its time, and as James Gunn points out, Asimov's fiction "began to reflect science as it was practised then and might be practised in the future, and scientists as they really were and might become" (Gunn 1996: 42). In reference to his inventive imagination and the success of his robot fiction, Asimov said,

> *If these stories of today fell in the hands of one of our descendants a century or five centuries hence, he or she might smile at some of our naïvetés and misfires, and yet be impressed, to a greater extent, by our successes at penetrating the dark veil of that which was to come (Asimov 1984: 11).*

In the real world, and after Capek and Asimov created the terminology and imagined the first intelligent robots, the field of robotics has witnessed extraordinary development, and even scientific research in the field, sustained by advanced technologies in biology, engineering, and computer science, owes too much to Asimov's science fiction. Indeed, Asimov's robots paved the way for the creation of the intelligent humanoid robot, not the one used in replacing human labour in assembly lines, but the one described by Asimov as a servant and a companion capable of interacting with humans. Elena and Alexander Libin, robotic psychology researchers at Georgetown University (Washington D.C.), declare, "As technology expands its influence on human society, new unexpected opportunities challenge the human mind. The merge of artificial and human worlds, as long predicted by Isaac Asimov, is happening before our very eyes" (Libin 2002: www.robotherapy.org), and they also argue,

> *An optimistic view builds up productive expectations among researchers and practitioners who all see different but positive consequences of human beings interacting with artificial partners ... The concept of artificial partners gives a person an opportunity to communicate with robots on various levels such as tactile-kinesthetic, sensory, emotional, cognitive, and socially-behavioural (Libin 2002: robotherapy.org).*

At the dawn of the third millennium, robots are no longer science fiction metaphors as corporations are spending enormous amounts of money each year researching ways to mimic the human mind with steel and silicon, the materials which make up the "microchip" that controls the various functions of the robot. According to Asimov, it is advanced research in computer science that would lead the machine to rival the human brain, and he wonders,

> *As the computer grows more compact, more versatile, more complex, more capable, more intelligent, might it not replace not just a person but all humanity? There is no clearly visible theoretical limit to how complex and intelligent a computer can become. But will the computer –robot- inevitably become more intelligent than the human being (Asimov 1984: 10).*

Certainly no easy answers are available as computer scientists, robotists, and psychologists are still hotly debating the same questions today, but in his new book, *Flesh and Machines: How Robots Will Change Us* (2002), Rodney Brooks, Director of the Artificial Intelligence Laboratory at the Massachusetts Institute of Technology and Chairman of iRobot Corporation, explores the relation between humans and their technological machines, and explains the possibility of building machines that exhibit lifelike behaviour. Brooks argues,

> *Today there is a clear distinction in most people's minds between the robots of science fiction and the machines in their daily lives ... In our fantasy, machines have emotions, desires, fears, loves, and pride. Our real machines do not ... But how will it look a hundred years from now? My thesis is that in just twenty years the boundary between fantasy and reality will be rent asunder (Brooks 2002: 116).*

Brooks believes that robots in the future will be ubiquitous machines that will have more in common with humans than one might think, and he reasons that the real problem facing scientists is to find what he calls "the juice" or the "X factor" that will transform an object into a subject with a sense of self-awareness. He even contends that "If we can't find 'the juice', it's because our science is not yet advanced enough," but he asserts, "the distinction between us and robots is going to disappear" (Brooks 2002: 234, 236). It seems that the future toward which Brooks points the way has been amply described in Asimov's robot novels *The Caves of Steel* and *The Naked Sun*.

3.2. *The Caves of Steel*

The Caves of Steel was the first robot novel written by Asimov after his robot stories; it appeared first in Galaxy Magazine from October to December 1953, and then was published by Doubleday in 1954. By incorporating a detective and mystery story within a science fiction setting, Asimov demonstrates that the genre does not exist in a vacuum and is not limited to any specific category of fiction that were thought incompatible with science fiction.

3.2.1. Summary

The story is set in New York City about three thousand years in the future. Earth is a homogeneous society of eight billion people who live in massive enclosed and self-contained steel-and-concrete megacities (about eight hundred Cities on Earth) with crowded populations of more than twenty million. The Cities arise because they are the most rational and organised way of making most efficient use of the land, and of dealing with the population explosion which still threatens Earth. The Cities are organised with miles of factories and hydroponic plants which surround the

residential sections connected and interlaced by expressways and moving sidewalk strips, which in turn surround an enormous central complex of administrative offices. By living in these weather-controlled womb-like environments, Earthmen have become agoraphobic, and they end loving their caves of steel, protecting them from the wind, the rain, and the sun. They no longer wish to venture into open spaces and they cannot imagine what it would be like to see the sunlight. The open country outside the City is given over to agriculture and mining, performed entirely by robots, although there is a great hostility toward robots on Earth because they take over human jobs, reducing displaced workers to subsistence level with none of the privileges of status on which the fifty-first century society is based.

A thousand years earlier, space colonisation had taken place, but galactic colonisation has come to a standstill, and now fifty planets, called the Outer Worlds, are inhabited by human settlers called Spacers, who have become quite different from their ancestor Earthmen. The Outer Worlds are luxurious as compared to Earth with limited and controlled populations and highly advanced science of robotics. Robots greatly outnumber the inhabitants of these worlds, and they are fully integrated into society and economy. Although they are descendants of the early settlers from Earth, the Spacers are contemptuous of their fellow humans, they disdain Earth's crowded billions, and they tightly control immigration of Earth's inhabitants to their worlds. The Spacers' reliance on technology has allowed them to eliminate most human infectious diseases, to have lifespans of hundreds of years, and to control their births in both quantity and quality. Besides, the Spacers are militarily powerful and they depend upon interstellar travel as they possess advanced technological machines and robots that are superior and virtually undistinguishable from humans. Humans' relationships with the Spacers are characterised by high

tensions since the City dwellers view the Spacers with suspicion and distrust, because they want to impose robot technology on Earth and they regard Earthmen as inferior. In addition, Earth has developed a fragile and vulnerable society torn apart by rioting and dissension. Although humans on Earth are as violently anti-robot as they are anti-Spacers, there are increasing numbers of Earthmen who call themselves Medievalists and whose excessive and intense devotion to the idea of a return to a simpler way of life close to nature and free from dependence on technology intensifies the tensions with the Spacers as well among the Earthmen themselves. The most indigenous object of Earthmen's fear of the Outer Worlds' technological superiority is the return to Earth of a group of Outer World scientists who have established their own quarantined Spacetown adjacent to New York City where the story is set. The scientists have come from Aurora, the oldest and most powerful of the Outer World inhabited planets, and their work is based on creating humanoid robots to live among Earthmen and gain a closer view of their lives.

In Spacetown, Dr. Roj Nemennuh Sarton, one of the most imminent Spacer Robotics experts, is murdered at his residence by a mysterious assailant, who shots him in the chest with a blaster. The murder is quickly reported to the New York Police Department where Commissioner Julius Enderby assigns the case to his trusted and experienced colleague Detective Elijah Baley, a forty-two-year-old plainclothesman in the New York police force with a C-5 rating. Enderby is confused and consternated over the murder of Dr. Sarton because the situation with the Spacers is so delicate and a City dweller is the only possible suspect. Enderby himself has been involved in negotiations with the Spacers concerning their project on Earth, and a meeting with Dr. Sarton has been due to take place that morning. Enderby tells Baley that he will have to take on as partner a Spacer robot named R.

Daneel Olivaw, who will live with Baley and his family throughout the course of the investigation. Regarding the great hostility Earthmen have toward robots, Baley views this assignment with distaste and consternation, but he is forced to accept it and he must overcome his personal antipathy because the Spacers have made it a special condition, and they have even given an ultimatum of forty-eight hours to find the murderer and solve the case before it escalades into a grave retribution to the vulnerable Earth. Thus Baley's job is a delicate one as he is presented with a unique set of challenges, and his career and the well-being of his family are at stake. In fact, the City life has produced a stratified society based on rating levels and in which privileges, such as a seat on the expressways, a private office with a window, and a private kitchen, separate the various strata of society. Detective Lije Baley has reached the C-5 level entitling him to a seat on the expressways, a railing around his desk at work, and a three-room apartment with a private wash-basin, and meals in his own kitchen. In contrast, most Earthmen live a communal life; they eat in common kitchens, utilise communal bathrooms called personals, and live in communal houses. In the Cities, there is a continuous struggle for status, but a false step in society would lead to declassification and the loss of privileges. Thus the secure life of Baley and his family is shaken when he is asked to investigate the murder of the Spacer scientist.

After receiving Enderby's instructions, Baley travels to Spacetown to meet his robot partner who is moulded in Dr. Sarton's image so that Daneel could easily pass as human. After their meeting, Baley and Daneel return to the City to proceed with the investigation. Once in the City, they come across a violent disturbance at a shoe store where one of the customers refuses to be served by robots, drawing therefore sympathetic as well as hostile crowds that try to ransack the store and attack the

robots. However, the situation is brought under control after the intervention of Daneel who uses his blaster to disperse the angry mob. Baley takes Daneel to his apartment and introduces him to his wife Jessie and their ten-year-old son Bentley. Jessie expresses her anger and distrust when she discovers that Daneel is a robot, and she reveals that she has already heard amongst her friends that a Spacer robot is roaming around in the City. When the two detectives begin to discuss the murder mystery, Daneel presents a series of slides taken at the murder scene, including one that shows unidentified slivers of broken glass. Daneel expresses his conviction that the murder is committed by a member of the Medievalists who resist the introduction of robots on Earth and who oppose the Spacers' interference with Earth's culture. Baley rejects this possibility for it is unconceivable that an Earthman, conditioned by life within the City dome, could think of crossing open country for any reason. Additionally, the case is complicated by the fact that the Spacers are very picky about every person allowed into Spacetown. Indeed, entry is controlled by the Spacers, who put every entering Earthman through a decontamination process, that Earthmen consider demeaning, and their security procedures allow no weapon to be sneaked into their town.

From this point, Baley considers a number of suspects and possible solutions, and he decides along with Daneel to make a further visit to Spacetown where they would meet with Dr. Hans Fastolfe, the head of Spacetown Security. During their meeting, Baley accuses Daneel of being Sarton and not a robot, and thinks that the murder is faked as part of an elaborate Spacer plot for political reasons to invade and occupy Earth. To disprove this hypothesis, Dr. Fastolfe orders Daneel to expose the wiring construction within his arm. Then he reveals to Baley that the Spacers were actually intent on creating disturbances in the City life and economy by forcing the

introduction of robots on Earth, but only in the interest of humanity so that humans would seek to colonise other unsettled planets and would be liberated from their entombment within the caves of steel. Dr. Fastolfe explains that if Earth is to survive, humans must colonise new planets, and for this purpose, there must be "a synthesis" or "a crossbreeding" to establish what the Spacers call a C/Fe culture. C/Fe represent the chemical symbols for carbon and iron, the basic elements for human and robot life, and they both express the collaboration of humans and machines that combines the best of the two and would make colonisation practical, because robots "can accompany humans and smooth the difficulties of initial adjustment to a raw world." Baley thinks the idea is nonsense. And after leaving Spacetown, Baley and Daneel stop at a restaurant within the City where they notice the presence of a group of men whom Daneel recognises as having been present at the shoe store riot. Baley and Daneel are pursued by the group led by a ringleader, later identified as Francis Clousarr, a leader of the Medievalists. Baley and Daneel flee and take refuge in the City's power plant, and the crowd is dispersed by riot police.

The following morning, Baley accuses Daneel of committing the murder, suggesting that he was constructed without the First Law of Robotics, and that he was the only one present at Sarton's house the morning he was murdered. Pursuing this line of enquiry, Baley arranges a meeting at Police Headquarters with Dr. Andrew Gerrigel, Earth's leading robotics expert, to ask for his expertise to find out whether a robot is capable of committing murder. After a series of tests, Dr. Gerrigel finds that Daneel's First Law is intact, and he explains to Baley that an entirely new theory of robotics would be required to construct a robot capable of murdering a human, and he exposes the technical difficulties that would be involved in designing such a robot. With only few hours left to complete the investigation, Baley receives a

visit from his wife Jessie who confesses her connection with the Medievalists, and she reveals that she has attended a number of their meetings in the City where she came to know Clousarr, and where there has been a great deal of talk about rioting and the destruction of robots. In addition to his confusion and anxiety about his wife's involvement with the covert Medievalist group, Baley's investigation receives a further blow when he discovers that the office robot at the Police Department, R. Sammy, has been completely immobilised and his brain destroyed by the use of an "alpha-sprayer" that emits hard radiation. Baley has been immediately accused of Sammy's destruction because, as Enderby states, he has always complained about the robot, and Baley is the only one who has access to the alpha-sprayer which has been brought from the power plant he and Daneel entered the previous day. Baley realises that if the charges are brought against him, he will be unable to continue the investigation, and he will lose his status and privileges that will bring his family down to the communal life of the City. At this stage, Daneel informs Baley that the Outer World authorities have decided to close the case without causing any threat of subjugation against Earth because the Spacer scientists are convinced that Earthmen are already suffering in their enclosed environment, and they will soon look toward colonising other outer worlds to survive.

In spite of the Spacers' decision, Baley's untenable position pushes him to play the last card in order to prove his innocence and to reveal Sarton's murderer. He begins to question Commissioner Enderby about his sympathies with the subversive ideas of the Medievalists, and by using his intuitive reasoning, he deduces that the true identity of Daneel and his presence in the City was leaked by Enderby through Clousarr, because the only ones who know that Daneel is a robot are Dr. Fastolfe and the police commissioner. So Baley theorises that Enderby has been disturbed by the

progress of the Spacers' project on Earth and he has been aware of the purpose for which Daneel has been designed, and therefore he has planned to destroy the robot, and thereby ending the Spacetown project altogether. Baley confronts Enderby with evidence by asking Daneel to project the photographs taken at the murder scene, and he stops at the one that shows the shards of broken glass found at the doorway of Sarton's house. Because of their optical properties, they are identified as bits of Enderby's eyeglasses which he has accidentally broken before calling at the scientist's door. When Sarton has answered the door, Enderby has shot him, thinking he is the robot because his blurred vision, after he has lost his glasses, has not been able to distinguish him from his identical creation. Then Baley deduces the rest of the solution from the facts of the case, and he evokes that Enderby has instructed the robot Sammy to take a blaster and cross the open country to meet him at Spacetown. In fact, a robot has no difficulty in traversing the open space outside the City, and he is allowed to avoid the security checks at Spacetown entrance where weapons carried by visitors are confiscated. Enderby has then entered Spacetown in the usual manner and he has been relieved of his own blaster. Once inside, he has received the other blaster from Sammy, and in the excitement of carrying out a murder, he has broken his glasses and then mistaken Sarton for Daneel. After the murder, he has returned the weapon to Sammy who has taken it back to the City. After the investigation has begun, the closer Baley and Daneel come to the solution, the greater the pressure on Enderby to destroy Sammy that represents the evidence against him. Finally, Enderby confesses his act of murdering Sarton and destroying the robot Sammy, but the Spacers agree not to prosecute him if he would accept to manoeuvre the Medievalist organisation in the direction of the colonisation of new worlds to save humanity. By the end of the story, Baley is convinced that colonisation of the Galaxy

is the only possible salvation for Earth and its inhabitants, and that robots and humans may have a future together in this process. The final scene shows Baley taking R. Daneel's elbow and they both walk out the door, arm in arm.

3.2.2. Human versus Robot

The Caves of Steel represents the first perfect fusion of two distinctive literary genres: a pure murder mystery set against a science fiction background. Indeed, Asimov combines the two genres by having science fiction supply the setting and the mystery supply the plot. Asimov said about this novel, "I think my peak period came in 1953 and the years immediately following ... and I think it was *The Caves of Steel* that lifted me a notch higher in my own estimation. I used it as a model for myself thereafter" (Quoted by Gunn 1996: 92). In *The Caves of Steel*, the murder and the subsequent attempt to unravel the mystery and discover the murderer function as the central structure around which all the other events are arranged. However, the murder and its detection are not actually the primary interest of the novel, and the science fictional elements and the consequences revealed at the end of the story appear as more important than the murder itself. Although science fiction has always been reproached for lacking concern with characterisation and its development, Asimov presents Elijah Baley and Daneel Olivaw as the key elements in the novel, not merely because they are the detectives who must solve the mystery, or "the Holmes and Watson of the future world" (Aldiss 2001: 298), as Brian Aldiss qualifies them, but essentially for their role in the interpretation and clearing up of the writer's thesis which is concerned with the interaction between humans and technology. Moreover, Elijah Baley's character and his development would not have been made possible without having been partnered with the robot character Daneel

Olivaw, and they both exist and act in a continuum to reflect the relationship between humans and machines that Asimov is mostly eager to highlight.

As the novel begins Elijah Baley appears as a thoughtful man with intense feelings of loyalty and sense of duty, and because the situation with the Spacers is characterised by high tensions, Enderby can trust Baley's discretion and rely on him to work with a robot. However, Baley is vigorously opposed to robots as most humans on Earth are, and his first impulses, as he tries unsuccessfully to prove that there has been no murder, or if there has, it has been committed by Daneel itself, push him into blind alleys and lead him to false solutions. Baley accepts to work with Daneel and to overcome his anti-robot prejudices, not only for the purpose of solving the murder mystery, but mostly important for uncovering the real reason for the underlying tension between the Spacers and Earthmen. In fact, humans harbour resentment toward robots which frequently results in riots and attacks against them and destruction of property, which in turn earn hard sanctions against Earth from the Spacers, such as inflicting indemnities and threatening the planet with invasion and subjugation. Although Baley does not belong to the conservative groups, he does eventually come to stand out as a representative of the group to which he belongs: the Terrestrials. He shares the quirks and prejudices of the City dwellers, and this appears in the opening chapter of the novel when he reacts violently to the office robot R. Sammy: "Baley said, 'I said, all right, go away!' R. Sammy turned on his heel and left to go about his duties. Baley wondered irritably why those same duties couldn't be done by a man." A colleague at the Police Department called Simpson replies to Baley's remark, "I'd kick R. Sammy's behind if I weren't afraid I'd break a leg" (9).

After meeting R. Daneel Olivaw, Baley does not trust his unemotional and impersonal nature, and the literalness of his mind constructed according to the Three Laws f Robotics. Daneel does not actually resemble any of the robots constructed on Earth; he is a humanoid looking like a human in the least details. In fact, Baley "had expected a creature with a skin of a hard and glossy plastic, nearly dead whit color. He had expected an expression fixed at an unreal level of inane good humor. He had expected jerky, faintly uncertain motions. R. Daneel was none of it" (28). Asimov goes further, revealing the purpose of the Spacers in creating such a human-like robot when Daneel tells Baley,

> *Robot Spacers are another thing entirely ... We are more flexible, naturally. We can be designed for adaptation to an earthly life. By being built into a particularly close similarity to the human externals, we could be accepted by Earthmen and allowed a closer view of their life ... Am just such a robot. For a year, Dr. Sarton had been working upon the design and construction of such robots. I was the first of his robots and so far the only one (54).*

Daneel then is part of the Spacers' project to penetrate the City life and to know the Earthmen and their way of life intimately, because the Spacers would not risk entering a City for its hugeness and crowds and the risk of contamination by infectious diseases from which Earthmen still suffer. Moreover, Daneel's humanoid demeanour and his way of perception of things and situations make him more effective as a character. In spite of being wrong in defending Enderby against the charges of committing the murder, Daneel displays an ability to analyse psychological motives, called by Asimov "cerebro-analysis," as he tells Baley,

> *I have told you that the cerebro-analytic properties of the Commissioner are such that it is impossible for him to have committed deliberate murder. I don't know what English word would be applied to the psychological fact. Cowardice, conscience, or compassion. I know the dictionary meaning of all these, but I cannot judge (200).*

Indeed, Daneel is provided with the ability to psychoprobe, which means that he can read a person's character to know what his basic motivations are, and thus he can tell what a person is psychologically capable or incapable of doing. Daneel tells Baley, "By cerebro-analysis, I mean the interpretation of the electromagnetic fields of the living brain cells … It gives us information concerning the temperamental and emotional make-up of an individual" (103), and he explains the process by adding, "It can be done by field measurements without the necessity of direct electrode contact," and through this "I can get a glimpse of emotion and most of all, I can analyse temperament, the underlying drives and attitudes of a man" (145). In his analysis of Baley, Daneel tells him,

> *From your psychic profile we judged you to be a useful specimen. Cerebroanalysis, a process I conducted upon you as soon as I met you, confirmed our judgment. You are a practical man, Elijah. You do not moon romantically over Earth's past, despite your healthy interest in it. Nor do you stubbornly embrace the City culture of Earth's present day. We felt that people such as yourself were the ones that could lead Earthmen to the stars once more (185).*

In addition to these qualities, Daneel mentions at the beginning of the story that there has been a final adjustment of his circuits that makes him more than an information-gathering machine, and he mentions that "a particularly strong drive has been inserted into my motivation banks; a desire for justice" (60). Baley cries astonishingly at the word "justice", and says that justice is an abstraction and only a human being can understand it, but Daneel defines it in pragmatic terms as the condition that exists when all the laws are enforced. When the Spacers decide to close the case before finding the murderer, Baley asks Daneel, "Where's your justice circuit, Daneel? Is this justice?" Daneel replies, "There are degrees of justice, Elijah. When the lesser is incompatible with the greater, the lesser must give way" (188). Baley goes further in his argument with the robot:

> *"Have you no personal curiosity, Daneel? You have called yourself a detective. Do you know what that implies? Do you understand that an investigation is more than a job of work? It is a challenge ..."*
>
> *He had known well enough then the qualities that marked off a man from a machine. Curiosity had to be one of them. A six-week-old kitten was curious, but how could there be a curious machine, be it ever so humanoid?*
>
> *R. Daneel echoed those thoughts by saying, "What do you mean by curiosity?"*
>
> *Baley put the best face on it. "Curiosity is the name we give to a desire to extend one's knowledge."*
>
> *"Such a desire exists within me, when the extension of knowledge is necessary for the performance of an assigned task ... Aimless extension of knowledge, however, is merely inefficiency. I am designed to avoid inefficiency" (188-189).*

In spite of his pragmatic reasoning, Baley does not like his robot partner at the start of the investigation, and he is often suspicious of his capabilities, and in casting about for responsibility for the crime, Baley accuses Daneel twice, of being a human and then of being constructed without the First Law.

Gradually, Baley begins to change, and the first sign of his change appears when he listens to Dr. Fastolfe's idealistic plea for the future of humanity. Dr. Fastolfe confronts Baley with the bleak reality of life in the Cities and the continuous rapid growth of Earth's population which represents no security for the future. After giving an image of the life of Spacers in the Outer Worlds, including his own planet Aurora, Dr. Fastolfe explains the Spacers' motives for urging Earthmen to colonise new unsettled planets in the Galaxy. He argues,

> *In trying to introduce robots here on Earth, we're doing our best to upset the balance of your City economy ... Not out of cruelty or callousness, believe me. A group of displaced men, as you call them, are what we need to serve as a nucleus for colonisation ... The resentment of the Earthmen for the robot blocks things. Yet those very robots can accompany humans, smooth the difficulties of initial adjustment to a raw world, make colonisation practical (98-99).*

Dr. Fastolfe clarifies the benefits the Spacers could get from this new wave of colonisation, and he says,

> *The new colonies will be built by humans who have the City background plus the beginning of a C/Fe culture. It will be a synthesis, a cross-breeding. As it stands now, Earth's own structure must go rocketing down in the near future, the Outer Worlds will slowly degenerate and decay ... but the new colonies will be a new and healthy strain, combining the best of both cultures. By their reaction upon the older worlds, including Earth, we ourselves may gain new life (99).*

Several times in the novel, the subject of a C/Fe culture arises, and when Baley asks about its significance, Daneel explains that "Carbon is the basis of human life and iron of robot life. It becomes easy to speak of C/Fe when you wish to express a culture that combines the best of the two on an equal but parallel basis ... a mixture of the two, without priority" (55). In Asimov's culture for the future of humanity, humans and robots live and work together on an equal and parallel basis that assures the product of human technology will not turn on and cause harm to its creator.

Eventually, Baley seems interested in the notion, but Dr. Fastolfe's defence of the Spacers' plan does not gain his full consent, and he simply remarks, "It was all ridiculous. Forcing Earthmen to emigrate, to set up a new society! It was nonsense" (100). Baley does not resist but for a while, and as he leaves Spacetown toward the City, he begins to consider the idea seriously. He notices the smells of the enclosed City for the first time:

> *For a moment, as the City closed in, his nose tingled to a slight and fugitive pungence. He thought wonderingly: The City smells. He thought of the twenty million human beings crammed into the steel walls of the great cave and for the first time in his life he smelled them with nostrils that had been washed clean by outdoor air ... – cleaner? (100)*

Daneel himself notices Baley's uneasiness and disturbance through cerebro-analysis, and he tells him,

> *Your disturbance is due to a clash between motivations within you. On the one hand, your devotion to the principles of your profession urges you to look deeply into this conspiracy of Earthmen. Another motivation, equally strong, forces you in the opposite direction. This much is clearly written in the electric field of your cerebral cells (146).*

In addition, Baley grows used to the presence of Daneel and he wonders whether it would be possible to work beside robots to colonise other planets, and he even finds himself echoing Dr. Fastolfe's arguments to the Medievalist Francis Clousarr. Baley tries to convince Clousarr that going back to the soil and living close to nature will not feed eight billion people, and instead, "why not move forward? Don't cut Earth's population. Use it for export. Go back to the soil, but go back to the soil of other planets. Colonize! ... There'd be robots to help" (169-170). Near the end of the investigation, Baley begins to confide in Daneel and even to think of him positively; they have finally become friends and they have learned to get along:

> *He was becoming used to the robot's queer mixture of ability and submissiveness ... Baley looked at R. Daneel's chiseled face with a sudden burning hope. Whatever the creature was, he was strong and faithful, animated by no selfishness. What more could you ask of any friend? Baley needed a friend and he was in no mood to cavil at the fact that a gear replaced a blood vessel in this particular one (173,183).*

Earlier in his conversation with Clousarr, Baley expresses an almost missionary zeal in his attempt to pass on to the anti-robot Medievalist what he has learned from Dr. Fastolfe and R. Daneel for the survival of humanity, he argues,

> *What are we afraid of in robots? ... They seem better than us –only they are not. That's the damned irony of it ... Look at this Daneel I've been with for over two days. He's taller than I am, stronger, handsomer ... He's got a better memory and knows more facts. He doesn't have to sleep or eat. He's not troubled by sickness or panic or love or guilt (170).*

Baley's new faith in the logical evolution of a robot-based technology does not exclude that robots are still machines that do not possess many of the qualities that make up a human being, he affirms,

> *We can't ever build a robot that will be even as good as a human being in anything that counts ... We can't create a robot with a sense of beauty or a sense of ethics or a sense of religion. There is no way we can raise a positronic brain one inch above the level of perfect materialism ... not as long as we understand what makes our own brains tick. Not as long as things exist that science can't measure. What is beauty, or goodness, or art, or love, or God? We're forever teetering on the brink of the unknowable, and trying to understand what can't be understood. It's what makes us men (170).*

As the novel draws to an end, Baley says to Daneel, "Will you stay on Earth after the Spacers go? ... I didn't think I would ever say anything like this to anyone like you, Daneel, but I trust you. I even –admire you" (206). At the end, suddenly smiling, Baley takes Daneel's arm, and they walk out the door. In fact, the final scene speaks to Asimov's own perception of the novel's heart; Baley's relationship with Daneel is analogous to man's potentially beneficial relationship with technology, and robots in particular. And Baley's view he adopts in the end of the story echoes Asimov's thesis that if humanity is to survive, it must overcome its fear of technology and learn to become its master. Therefore, it becomes clear that Baley's conversion to the Spacers' goals is more important than the discovery of the murderer of Dr. Sarton, and this idea is plainly expressed by Daneel after the Spacers' decision to end the investigation: "We were never under any delusions as to which was more important, an individual or humanity. To continue the investigation now would involve interfering with a situation which we now find satisfactory" (188). The sense of satisfaction of Daneel and the Spacers comes obviously from achieving their aims of persuading Earthmen to accept the introduction of robots and to colonise new worlds. Daneel reveals to Baley,

> *We of Spacetown have tried to change Earth by changing its economy. We have tried to introduce our C/Fe culture ... Still, in twenty-five years, we have failed. The harder we tried, the stronger the opposing party of the Medievalists grew ... Our project is concluded. We are satisfied that Earth will colonise (184).*

The statement means that humanity transcends the individual, and even though Baley and Daneel are active characters, they are not important as individuals, but rather as representatives of humans and technology. Indeed, Daneel's work with Baley is revealed as being an experiment, not in whether robots can help solving crime cases, but in whether they can persuade Earthmen to accept robots and then extraterrestrial emigration to save them from their caves of steel. Daneel tells baley,

> *It was Dr. Sarton who first theorized that we must reverse our tactics. We must first find a segment of Earth's population that desired what we desired or could be persuaded to do so ... You, yourself, Elijah, were an interesting experiment ... We felt that people such as yourself were the ones that could lead Earthmen to the stars once more (185).*

Even the guilty Enderby is finally persuaded, on the promise that he will not be prosecuted, to help and cooperate with the Spacers to achieve their goals and fulfil their project in the interest of humanity. Unsurprisingly, it is Elijah Baley himself who asks Enderby to manoeuvre the Medievalists and convince them to go back to the soil, but on other planets:

> *If Dr. Sarton's murder will make it possible for you to swing Medievalism into line for the resumption of Galactic colonization, they'll probably consider it a worthwhile sacrifice ... If you help us, you will be doing right. The colonization of space is the only possible salvation of Earth (205).*

And although Baley considers himself too old to leave Earth, he hopes that someday Daneel might help his son Bentley to do so. This reflects that Asimov's concern is not the individual man, but rather humanity and its future because of the problems that face humans on Earth. Even when Asimov presents the other characters in the story, he portrays them as subordinates who fill the immediate needs of the plot, but they never really come alive, and they lack the intricacies of personality that characterise mainstream fiction. For instance, Dr. Fastolfe and Dr. Gerrigel are scientists about whom we know nothing except their role in elucidating

the Spacers project's goal by Dr. Fastolfe and the scientific expertise provided by Dr. Gerrigel. Gender relations are also remarkably neglected, and Baley's wife Jessie, the only female character in the novel, reflects with her timid domesticity, in spite of her brief connection with the Medievalists, the traditional status of women that would unlikely have survived in that climate thousands of years in the future. However, the Chief of police Enderby is described with Medievalist affectations and sentimental attachment to bygone ways and customs, especially by the wearing of old-fashioned glasses instead of the currently used contact lenses. But these characteristics are made to serve primarily as crucial clues to the ultimate solution of the plot and not to flesh out a character. And even the solution of the murder mystery is revealed as not being the finality of the novel's storyline.

In contrast, Baley is portrayed with some details about his personal life, but these details do not have any real effect in shaping his personality or in his development as a character. Among the past experiences that keep flooding into his mind we know that his father had been a nuclear physicist with a rating in the top percentile, and then he was declassified because of an accident in the nuclear plant where he worked. Baley knows the horrors of declassification and that knowledge motivates his desire to solve the murder case rather than go through what his father suffered. Baley's mother died early and his father died when he was eight, and Baley and his two older sisters went into the section orphanage. Baley also remembers the childhood games of hide-and-seek and running the strips, and his uncle who worked in Yeast-town, and who used to give him yeast treats when he was a child. In fact, Baley's memories serve mainly to give an image of the way of life inherent in the City and which any Earthman may experience. However, the change that we perceive in Baley throughout the story mirrors the change in Earthmen's attitude

which eventually urges them into a relationship with robots (C/Fe) that would make possible the colonisation of uninhabited planets to solve the problem of overpopulation.

For this purpose, Asimov treats R. Daneel sympathetically as a representative figure of technology that would help to liberate humans from the hard conditions of life in the enclosed Cities unlike the Earthmen's negative view that considers robots a threat to their jobs and their humane values. In considering Asimov's principal theme in the novel, science fiction critic Joseph Patrouch affirms, "If we continue to work at it –if we learn to get along with science and technology as Baley learned to get along with Daneel- beyond the City is the Galactic Empire. Man among the stars is surely science fiction's best symbol of the freedom of man" (Patrouch 1978: 117). Therefore, characters in Asimov's novel are not characters with individual personality traits in the conventional tradition of mainstream literature; they are representative figures that fulfil specific functions, and as Joanna Russ points out, "The protagonists of science fiction are always collective, never individual persons (individuals often appear exemplary or representative figures)" (Quoted by Sanders 1979: 131). From a sociological point of view, the real shaping influences and factors in the contemporary world and also in the future world are the economic, social, and technological forces that are not directed by individual men and that have led to the subordination of character to theme and to the physical environment in which humans live. In this respect, Scott Sanders describes the effects of various powers in society on the individual man who appears in science fiction:

> *In its treatment of character science fiction reproduces the experience of living in a regimented society, within which the individual has become anonymous: persons are interchangeable, relating to each other through socially defined roles; actions are governed by procedure, and thus do not*

> *characterize the actor; emotion is repressed in favour of reason; the individual is subordinated to system. Science itself, increasingly bureaucratized and collectivized, has fostered an impersonal model of knowledge which has become the most influential epistemology in industrial civilization ... By the means of extrapolation, science fiction creates the effect through which we are not led to identify with the characters; instead we are invited to reflect critically on our own social, ecological, and metaphysical situation, in light of the fictive system (Sanders 1979: 135).*

Thus the most important element that commands the science fiction writer's attention is the environment or the landscape in which mankind –the collective entity not individual persons- attempts to survive. In *The Caves of Steel*, it is the environment or the framework within which the characters act out their destiny which is at issue; it stands out as the opposing actor or the antagonist.

3.2.3. Environment as Character

The events of *The Caves of Steel* take place in New York City about three thousand years in the future. New York is imagined to have twenty million people living on two thousand square miles, and the chief tension in this future society is that of overpopulation as the numbers of people are constantly and rapidly growing, and they have already passed the point of sustainability on Earth. The Cities are presented as the technological solution to man's problems with demographic explosion in order to make better use of the lands in agriculture and the exploitation of the natural resources. Instead of giving a static explanation of how a future City might function, Asimov uses the mystery story as his structural device in helping readers imaginatively experience life in that City. In retrospect, the setting with its social, economic, and cultural elements proves quite important to the murder investigation, to the psychology of the City's citizens, and to the theme of the Spacers trying to induce humans to leave the City's protection. It is through Baley's consciousness that all the details about the City life are perceived; he spends most of

his time out of his office following up leads and clues, and everywhere Baley goes he is conscious of his surroundings.

Early in the novel, Asimov stops the action for a detailed exposition on the development of the Cities on Earth, and it is through Baley that the Cities are perceived as good: “The Cities were good. Everyone but the Medievalists knew that there was no substitute, no reasonable substitute” (24). At the same time, the novel raises the aspect of the Spacers’ attitudes toward Earth’s inhabitants that infuriate them. Indeed, since the establishment of Spacetown twenty-five years earlier, the Spacers have put a force barrier between them and the City, and Earthmen are not allowed into Spacetown except when “submitted to a medical examination and a routine disinfection” (20). Baley remembers the barrier riots in which the frustrated mob shouted slogans against the Spacers and destroyed City property out of sheer dissatisfaction until the City police force dispersed them by using “sommo vapor and retch gas” (20). The attitudes of the Spacers are dictated by the fact that in their Outer Worlds they have developed a luxurious and stable society whose economy is based on robot technology, and because of their advanced science they have eliminated infectious diseases and kept their birth rate down and immigrants from Earth out, and this is the reason behind “their insistence on considering the natives of Earth as disgustingly diseased” (20). However, the conflict between the Spacers and Earthmen does not explain alone the frustration of the City dwellers; it is actually the City itself and the conditions of life in the City that push them to mobilise into the Medievalist organisation, looking yearningly for a return to the old ways of life of the Medieval times when man lived close to nature (Medieval times refers to the twentieth century period and its way of life; windows and eyeglasses are referred to as Medieval. Enderby calls Baley a “modernist” referring to the time of the story).

Enderby describes nostalgically a romanticised version of life before the Cities, he says,

> *In Medieval times, people lived in the open. I don't mean on the farms only. I mean in the cities, too. Even in New York. When it rained, they didn't think of it as waste. They glorified in it. They lived close to nature. It's healthier, better. The troubles of modern life come from being divorced from nature (12).*

Even though, Baley seems comfortable in his life in the City, and he does not approve the Medievalist cause as he firmly believes that "there was no doubt about it: the City was the culmination of man's mastery over the environment. Not space travel, nor the fifty colonized worlds that were now so haughtily independent, but the City ... The Cities were good" (23-24).

The first extensive discussion of the development of the City occurs when Baley rides the expressway toward Spacetown to meet his robot partner:

> *Efficiency had been forced on Earth with increasing population. Two billion people, three billion, even five billion could be supported by the planet by progressive lowering of the standard of living. When the population reaches eight billion, however, semistarvation becomes too much like the real thing ... The radical change had been the gradual formation of the Cities over a thousand years of Earth's history. Efficiency implies bigness ... Think of the inefficiency of a hundred thousand houses for a hundred thousand families as compared with a hundred-thousand-unit Section; a book-film collection in each house as compared with a Section film concentrate; independent video for each family as compared with video-piping systems. For that matter, take the simple folly of endless duplication of kitchens and bathrooms as compared with the thoroughly efficient diners and shower rooms made possible by City culture ... City culture meant optimum distribution of food, increasing utilization of yeasts and hydroponics. New York City spread over two thousand square miles and at the last census its population was well over twenty million. There were some eight hundred Cities on Earth ... Each City became a semiautonomous unit, economically all but self-sufficient. It could roof itself in, gird itself about, burrow itself under. It became a steel cave, a tremendous, self-contained cave of steel and concrete. It could lay itself out scientifically. At the center was the enormous complex of administrative offices. In careful orientation to one another and to the whole were the large residential Sections connected and interlaced by the expressway and the local ways. Toward the*

> *outskirts were the factories, the hydroponic plants, the yeast-culture vats, the power plants. Through all the melee were the water pipes and sewage ducts, schools, prisons and shops, power lines and communication beams. Practically none of Earth's population lived outside the Cities (22-23).*

According to this description, the various parts of the City have been converted into gigantic, air-conditioned, enclosed caves of steel and concrete where shopping centres, apartment Sections and administrative complexes are connected by underground walkways and expressways, and where people eat in communal kitchens, go to communal shower rooms, and ride the moving strips which furnish the City's transportation. These conditions of life in the City have increasingly lessened the need and urge to go outside, and people have lived in their caves for so long that they are psychologically unable to go into the open air and under the sun. Indeed, the City has shaped its dwellers' habits and behaviour that they have eventually developed a severe state of agoraphobia as they are frightened by the outdoors and they feel comfortable only inside the City womb. Asimov goes further, through Baley's consciousness, to reflect on the economic aspects generated by this conversion:

> *Outside was the wilderness, the open sky that few men could face with anything like equanimity ... It held the water that men must have, the coal and the wood that were the ultimate raw materials for plastics and for the eternally growing yeast. (Petroleum had long since gone, but oil-rich strains of yeast were an adequate substitute.) The land between the Cities still held the mines, and was still used to a larger extent than most men realized for growing food and grazing stock ... But few humans were required to run the mines and ranches, to exploit the farms and pipe the water, and these supervised at long distance. Robots did the work better and required less ... It was on Earth that the positronic brain was invented and on Earth that robots had first been put to productive use ... Of course, the Outer Worlds always acted as though robots had been born of their culture ... Here on Earth, robots had always been restricted to the mines and farmlands. Only in the last quarter century, under the urgings of the Spacers, had robots filtered their slow way into the Cities (24).*

In addition, Asimov provides a lot of details, both social and psychological, about Earthmen's attitudes and codes of behaviour that have developed naturally in the midst of the different Sections of the City. For instance, he describes the natural solariums at the uppermost levels of some Sections where the wealthier and highly rated citizens live, "where a partition of quartz with a movable metal shield excludes the air but lets in the sunlight. There the wives and daughters of the City's highest administrators and executives may tan themselves. There a unique thing happens every evening. Night falls" (60). From this revelation about a world in which the fall of night is a unique event, Asimov moves to the depiction of some habits of humans that have changed except the habit of sleeping:

> *Much of the earlier habits of Earthly society have been given up in the interests of that same economy and efficiency: space, privacy, even much of free will. They are the products of civilization, however, and not much more than ten thousand years old.*
>
> *The adjustment of sleep to night, however, is as old as man: a million years. The habit is not easy to give up. Although the evening is unseen, apartment lights dim as the hours of the darkness pass and the City's pulse sinks. Though no one can tell noon from midnight by any cosmic phenomenon along the enclosed avenues of the City, mankind follows the mute partitionings of the hour hand. The expressways empty, the noise of life sinks, the moving mob among the colossal alleys melts away; New York City lies in Earth's unnoticed shadow, and its population sleeps (61).*

Like all City dwellers, Baley's Character also is shaped by the conditions of life in the City and the codes of behaviour he has learned from his environment. When he visits Spacetown in the course of his investigation, he is confronted with open space for the first time in his life; he must breathe natural instead of conditioned air and he must see the sun. Baley feels quite uncomfortable:

> *He felt a whiff of air against his face and, automatically, he thought a squad car had passed. R. Daneel must have read his uneasiness in his face. He said, "You are essentially in open air now, Elijah. It is unconditioned."*
>
> *Baley felt faintly sick ... He tightened his nostrils, as though by pulling them*

> *together he could the more effectively screen the ingoing air ... The air currents hit annoyingly against his face. They were gentle enough, but they were erratic. That bothered him. Worse came. The corridor opened into blueness and as they approached its end, strong white light washed down. Baley had seen sunlight. He had been in a natural solarium once in the line of duty. But there, protecting glass had enclosed the place ... Here, all was open. Automatically, he looked up at the sun, then turned away. His dazzled eyes blinked and watered (75-76).*

Once inside the Spacers' colony, Baley "was thankful for the feel of the conditioned air" (76), and when he is offered some natural fruits, he feels uneasiness again because he has always eaten processed food which

> *had been cooked or ground, blended or compounded. Fruit, now, properly speaking, should come in the form of sauce or preserve. What he was holding now must have come straight from the dirt of a planet's soil. He thought: I hope they've washed it at least (77).*

From the thorough description of the environment in Asimov's fictional world, it clearly appears that the primary concern in *The Caves of Steel* is the great change that has taken place in human society in the future and its impact on the social and psychological aspects of human life. Therefore, *The Caves of Steel* as a detective story cannot work in any other setting because the mystery story depends on the psychology of the human characters, and that psychology in turn depends on the environment in which the characters live and which leads them to think and behave in a way that makes the mystery story possible. Indeed, the murder scene could have been reached by anyone from the City, had he simply crossed open country, but since the City dwellers are psychologically unable to do that, the conclusion is that this action is impossible and therefore the mystery is set. Then in contrast to the earlier perception of Cities as a good solution to man's problems on Earth because of overpopulation, the City begins to seem less and less satisfactory as the story goes along. Dr. Fastolfe, the spokesman of the Spacers who want to break Earthmen from their home planet, presents the real overriding image of the City. He tells Baley,

> *Are you satisfied with life on Earth? ... Earthmen are all so coddled, so enwombed in their imprisoning caves of steel, that they are caught forever. You, Mr. Baley, won't even believe that a City dweller is capable of crossing country to get to Spacetown ... Civism is ruining Earth, sir (97).*

Civism is used to refer to the philosophy that supports the way of life created by the City, and it is the changing attitude toward it that the entire novel is about. Civism has produced a life enclosed, crowded, and conducted at levels of existence that can be supported only by evolved attitudes and codes of behaviour to cope with the new problems on Earth. Even more disturbing, Baley begins to see the City as a suffocating prison, and he becomes more conscious that "the City was the acme of efficiency, but it made demands of its inhabitants. It asked them to live in a tight routine and order their lives under a strict and scientific control" (170). Although there is a basic level of security, which is the bare possibility of existence insured even for those entirely declassified, civism has not eliminated the struggle for social status. The class structure in the City is based on C-ratings and the addition of some privileges that accompany the various levels of classification, such as a private shower room, a private kitchen, and a seat on the transportation system. Commissioner Enderby, for instance, earns the right to a window in his office, and Baley, who is C-5 and he may be made C-6 if he successfully handles the case of Sarton's murder, has earned the activation of his washbowl and the privileges of a seat on the upper level of the transportation system and of eating in his own home. The most abominable thing and the ultimate horror that may happen to a City dweller is declassification and the loss of these privileges. Baley thinks, "It was the addition of status that brought the little things: a more comfortable seat here, a better cut of meat there, a shorter wait in line at the other place ... no one could give up those privileges, once acquired, without a pang. That was the point" (91). At one moment, Baley remembers his father's declassification and his severe life in the community

Sections called “barracks”: “He remembered the barracks of his childhood; the grinding communal existence just this side of the edge of bearability.” (31).

Moreover, the economic situation on Earth is another factor that makes things hard for humans to support, and it is depicted as quite delicate because of the constant growth of population and the scarcity of natural resources and food supply which threaten the Cities’ inhabitants with extinction. Baley reflects on the situation early in the novel when he considers the Cities a good solution and he simply mentions that “The only trouble was that they [Cities] wouldn’t stay good. Earth’s population was still rising. Some day, with all that the Cities could do, the available calories per person would simply fall below basic subsistence level” (24). But Baley gradually becomes aware of the seriousness of the problem when he listens to Dr. Fastolfe’s arguments about the future of Earth:

> *Earth is in a blind alley, man ... A City like New York must spend every ounce of effort getting water in and waste out. The nuclear power plants are kept going by uranium supplies that are constantly more difficult to obtain even from the other planets of the system, and the supply needed goes up steadily. The life of the City depends every moment on the arrival of wood pulp for the yeast vats and minerals for the hydroponic plants. Air must be circulated increasingly. The balance is a very delicate one in a hundred directions, and growing more delicate each year ... which is no security for the future ... When New York first became a City, it could have lived on itself for a day. Now it cannot do so for an hour. A disaster that would have been merely serious a thousand years ago, and acute a hundred years ago would now be surely fatal (95-96).*

By the end of the novel, Baley finally perceives the City as a prison rather than a solution, and he expresses his willingness to accept colonisation with the help of robots to liberate humanity. Ultimately, the appeal of *The Caves of Steel* depends on the depiction of the environment as an uncontrollable force that shapes the lives of its inhabitants and determines their fate, and it is eventually this force that has led to the

changing attitude toward it as well as toward technology which had itself shaped this environment in man's own interests. In fact, the City is made and constructed by man and it is maintained with the support of technology to solve the problems generated by overpopulation, but the City turns into a big prison and a trap that has shaped man's life in a negative way. The essential question raised by Asimov in this context is not the choice between technology and the abandonment thereof, but the choice is between two applications of technology. Asimov is known primarily as pro-science and pro-technology, and he therefore urges man to make better use of technology (represented in the novel by robots), since he believes that scientific progress and further technological developments are the only solutions to man's problems and the only possible salvation of humanity in this dangerous and constantly changing world. It appears from this that *The Caves of Steel* is essentially about man's relationship to his environment and how he can make better use of his scientific knowledge and technological advancements for a better life in the future, and robots in the novel represent this technology that can help man achieve this goal. In this context, it is important to mention that, unlike many science fiction writers of the period who have depicted in their stories the negative side of modern technology, Asimov has maintained that robots are completely under human control, and *The Caves of Steel* shows Asimov's confident assumption that man can remain the unquestioned master of his technologies in spite of the dangers that may arise from the illicit use of these technologies by some.

In light of the great importance Asimov gives to the description of the environment in his future world, it clearly appears that the concentration on the development of autonomous characters and complex individual personalities does not seem to serve the thematic focus of the novel as a science fiction work since the

concern of *The Caves of Steel* goes beyond individual humans and addresses all Earthmen, and the problems that face the world do not concern individuals and cannot be solved at the personal level, and as Scott Sanders claims, "Character in science fiction is not neglected; it is subverted" (Sanders 1979: 134). In fact, the destruction –not neglect- of character in Asimov's novel (and by analogy in science fiction of the post-war period) does by no means reflect a weakness in the genre and it is definitely not the consequence of paying more attention to other aspects in the narrative. It is naturally the way by which the science fiction writer gives the character his real dimension under the changing environmental circumstances, and as Joseph Patrouch points out,

> *Science fiction has at its thematic center a concern with the certainty of primarily technological change in man's contemporary environment. This concern is best expressed in its concentration on setting, on creative, imaginative scientifically plausible settings. If we can adapt ourselves to the many worlds of science fiction, surely we can adapt ourselves to the one world of the day after tomorrow, whatever it really turns out to be like (Patrouch 1978: xvii).*

While the modernist writers like D. H. Lawrence, James Joyce, Franz Kafka, and Samuel Beckett have recorded the dissolution of the self under the pressures of recent history and have tried to explore the psyche in search of the self, science fiction writers have began by assuming that dissolution in the face of the social and economic pressures in contemporary world (projected into the future), but they have tended instead to explore the causes and effects by dealing with the various changes and developments in society whose effects on humanity, not on individual characters, is the primary concern. Joseph Patrouch affirms that

> *One quite legitimate way of looking at science fiction is that setting is the main character and plot is simply an expository device for exploring setting ... Where other fiction assumes the setting (real) and concentrates on the individual living in that setting, science fiction tends to assume the people and concentrates on the setting (Patrouch 1978: xxi).*

And since science fiction is the literature of extrapolation based on known facts and knowledge of the real contemporary world, Scott Sanders refers to the conditions in science fiction environments that have defined the unique nature of characters by arguing that

> *We are pushed towards anonymity by bureaucracies and technology, by the scale of life in the cities, by the mass media, by the techniques of manipulation perfected in government and business ... It makes no more sense to condemn the genre for its seeming neglect of characterization than to praise the modernist novel for its cultivation of the isolated ego. Both are preoccupied with threats to identity in the modern world (Sanders 1979: 145).*

Patrick Parrinder provides a similar argument as to the role of characterisation in science fiction which he defines as "functional", and he says,

> *Individual characterization is usually a secondary concern in science fiction ... This is because science fiction describes a world transformed by some new element. The new element –whether it is an extrapolation from present-day science and technology, or some form of intervention by extraterrestrial sources- is bound to have a deep effect on the reactions of the human characters, so that characterization is always to a large extent functional, a means towards the most effective presentation of the novum which called the story into being in the first place. In science fiction it is the new element, and not the need for subtle and rounded characterization, which determines the basic rules of the genre (Parrinder 1979: 152).*

The same concern of setting and environment appears in Asimov's second robot novel *The Naked Sun* which reunites Elijah Baley and R. Daneel Olivaw to solve another murder mystery but in a different setting and under different circumstances.

3.3. *The Naked Sun*

The Naked Sun is the sequel to *The Caves of Steel* and it carries the detective job of its major character to one of the Outer World planets with an entirely different environment. The novel was serialised in Astounding Science Fiction between October and December 1956 and was published in book form in 1957.

3.3.1. Summary

The Naked Sun takes place on the planet Solaria, a wealthy and luxurious Outer World without crime and without police force, and on which technology has grown to be the most advanced in the Galaxy. Solaria is described as the Paradise of all Spacer Worlds; it has a rigidly controlled population of 20.000 on an Earth-sized world with strict birth control laws, and Solarians live in vast individual estates of more than ten thousand square miles served by a huge number of robots that outnumber people ten thousand to one. All the Outer Worlds have a robot-based economy, but Solaria is by far the best known because of the variety of robots and advanced models it produces, so that it exports specialised models to all the other Spacer Worlds. Solaria was settled about three hundred years earlier by the wealthier Spacers of a nearby planet named Nexon who had felt cramped by the rapid growth of population on Nexon and the limitation placed on the number of robots. So they settled a new planet they named Solaria and resolved to limit human population to the optimum number of 20.000 and allow the number of robots to grow unrestricted. Human population is limited by assigning mates according to genetic considerations (some Solarians wear gene-coded rings), and children are licensed according to population needs and gene charts. After laboratory fertilisation, one-month-old foetuses are brought to term in tanks, then are taken to "fetal farms" where they are raised and graduated to independence after a long period of education and training. Children are raised on the farms by robots with human supervision, and in spite of being instinctively gregarious, they are taught and trained to grow up into proper Solarians who prefer isolation and can hardly allow personal contact with other humans. In fact, because of the huge estates owned by individual Solarians and the empty space on the planet, Solarians have learned to work with robots and have

developed the habit of never seeing any person, which has eventually become a neurotic state of haphephobia. As a result, a culture has developed in which "viewing" by trimension is the custom when Solarians want to communicate with each other. Viewing is achieved via technological devices that set up trimentional images which disappear once the conversation is completed. Solarians "view" each other as life-sized holographic projections, and even a man and a woman who are assigned to each other to form a couple spend a strictly limited time together. And on the rare occasions when meeting or personal contact (seeing) is unavoidable, every part of the body except the face is clothed down to gloves and the persons stand far from each other.

Over the years Solaria has become a utopian society modelled on the ancient Athenian civilisation where the pursuit of pleasure is the most important concern. All Solarians belong to a leisure class supported by two hundred million labouring robots doing all kinds of work, and, like the Helots of ancient Sparta, never thinking of revolt or rebellion. In addition, as there is little or no personal contact between the inhabitants of the planet, Solarians have lost insight into human nature and human relations, and they do not know more particularly how to deal with hostility or acts of outright violence. Indeed, having the advantage of a peaceful and luxurious life, Solarians have not felt the need to develop a rigid military machine or a police force except a board of security led by Hannis Gruer, Head of Solarian Security. When Hannis Gruer finds out about a conspiracy to develop killer robotic spaceships on Solaria, he decides to call Detective Elijah Baley in from Earth as an advisor after he has heard of Baley's work in solving the case of Dr. Sarton's murder. Yet, Gruer is opposed by his own colleagues because of the hostilities that exist between Earthmen

and the Spacers. Gruer finds himself unable to go along with his plan until a violent crime happens on Solaria, the very first murder in two centuries.

The murder occurs in a large manor house on a large country estate where Dr. Rikaine Delmarre, a "fetal engineer" who has been collaborating with a robotics expert named Jothan Leebig on developing a robot that could discipline children, has his head crushed by a blunt instrument while working in home laboratory. As Solarians are incompetent in dealing with murder cases, Hannis Gruer contacts the Aurorans and through them he approaches the Earth government to send Baley to Solaria to investigate Delmarre's murder. And since no Earthman has ever been allowed to visit the Outer Worlds and because Earth's leaders suspect intrigue on a galactic scale (Earth's sociologists are predicting a Spacer plan of invasion and destruction of Earth), Baley is sent to Solaria, not only to handle the murder case, but he is also instructed by Undersecretary of the Justice Department in Washington Albert Minnim to find out as much as he can about Solaria because of Earth's political situation as the weakest member of the Galaxy and its urgent need for first-hand information about the Outer Worlds. Being agoraphobic like all Earth's inhabitants and let alone travelling in space to a distant planet, Baley panics at the idea of leaving the protection of the City and going outside in the open air and under the sun. Solaria is an agoraphobic's nightmare, and yet Baley must endure the experience to accomplish his mission. From Washington Baley gets aboard the Spacers' hyperspace craft, and when the spaceship lands on Solaria, Baley feels that he is losing the battle against his open-space phobia. Baley has been told about an unnamed Spacer partner to be waiting for him, and to his surprise the partner appears to be R. Daneel Olivaw. Baley is so pleased to meet his friend again after few months from their working together on Earth. Daneel is assigned from the planet

Aurora to accompany Baley in his investigation because the Aurorans themselves want to know about the secret plans of the Solarians, and for this purpose Daneel pretends to be an Auroran human and not a robot.

From his first contact with Solaria, Baley quickly finds that this Outer World is the exact opposite of Earth. Eight billion Earthlings live in crowded, dense and enclosed Cities while Solarians live on huge estates with millions of robots, and they consider physical contact with a mate repugnant. Baley soon begins his investigation by meeting Head of Solarian Security Hannis Gruer who stresses the political nature of the crime and hints to a secret plan which makes the whole human race in danger. When the crime and the clues are presented, it appears that the case is similar to that in *The Caves of Steel*; no weapon is found on the scene, no witness, and no evidence since the robot who was present when the crime was committed becomes so disordered and incoherent so that he has to be scrapped. Besides, everyone on Solaria agrees that a Solarian is incapable of the murder because he would have experienced psychological inhibitions in the physical presence of Delmarre, and Delmarre himself would have reacted neurotically to the personal presence of an outsider. Thus everyone suspects Delmarre's beautiful wife Gladia, the only person present at the scene that discovers the body and then blacks out and falls to the floor. After she regains consciousness she is examined and treated by Dr. Altin Thool who tells her that he is her genetic father (Gladia does not know her parents like all Solarians who are brought up individually on the farms). Baley proceeds in his investigation by collecting data and clues, and he conducts a round of interviews with the suspects through both "viewing" and "seeing". And in spite of the Solarians' insistence on viewing instead of personal meeting and his own crisis with agoraphobia, Baley goes on with determination and he tries to face the new

environment. He first interviews through the trimensional device Gladia Delmarre who admits that she has discovered the body after having heard her husband shout for help, and the shock of the actual presence of the body has caused her to faint, but she rejects all circumstantial evidence and she vehemently denies having killed her husband.

Before Baley pushes on in his investigation, a murder attempt is made on Gruer's life via a poisoned drink served to him by a robot. Gruer survives the attempt, but he is incapacitated for the rest of his life and he is succeeded by Corwin Attlebish as Acting Head of Security, who is less disposed to help Baley in his work or to listen to his argument, and he even expresses his desire to make Baley and Daneel depart from Solaria. In spite of Attlebish's repugnance, he allows Baley to interview Solarians through "seeing", and the first person Baley asks to see is a sociologist who provides him with detailed information about the planet and its inhabitants. The first experience of Baley outside the mansion reserved to him and his partner during their stay drives him by a vessel to the estate of Anselmo Quemot, Solaria's most famous sociologist, from whom he learns about Solaria's culture, history, and the development of robot industry, and also about the nature of Delmarre's job with his assistant Klorissa Cantoro. Then Baley interviews Klorissa, Delmarre's assistant fetologist and expert on the development of embryos and the rearing of children to be proper non-gregarious Solarians. After the meeting with Klorissa through "viewing", Baley convinces her to meet in person outside the residence made for him and Daneel on Gruer's estate. And because Daneel opposes the idea of Baley's going out into open space for the harm it may cause him, Baley reveals the true identity of Daneel to the household robots present in their residence and orders them to keep Daneel under their control and not to let him leave in order

to carry on the investigation his own way and to get rid of Daneel's restrictions. During Baley's personal meeting with Klorissa who insists on standing very far from him, he briefly suspects her because he realises that she can endure human presence, and she also may be ambitious to take up Delmarre's position. On the other hand, Klorissa provides information concerning aspects of Solarian genetic engineering and a valuable clue concerning the work of Delmarre and his associate collaborator Jothan Leebig. She reveals that Delmarre and Leebig were working on experimental robots that would have a weakened First Law and that could be instructed to discipline children without becoming disordered or unstable as a result of a damage in their positronic brain. Following these information, Baley visits the "farm" situated outside Delmarre's laboratory where month-old foetuses are brought to be raised and trained. In the farm an attempt is made on Baley's life when a child who is playing with a bow and arrow is given a poisoned arrow by a robot which he shoots at Baley, but luckily the arrow narrowly misses him.

Next, Baley interviews Jothan Leebig who appears so fanatically pro-robot and anti-human that he is immediately suspected of committing the murder. Leebig gives Baley detailed information about robotics and the construction of various models of robots, and suddenly he is outraged when Baley proposes a theory of murder by a series of robot actions, each innocent in itself. Baley suggests that the First Law of Robotics has been misstated and that there is the important word of "knowledge" which is missing in the Law. The First Law should read, "A robot may do nothing that, to its knowledge, will harm a human being, nor, through inaction, knowingly allow a human being to come to harm." Besides, Leebig tells Baley that Gladia hates her husband because of his coldness, and thus Baley decides to interview Gladia again. Gladia says that she quarrelled with her husband so often, and that she was in

contact with Leebig by way of frequent viewing and Leebig expressed his feeling of sympathy and compassion toward her. She also reveals that Leebig tried hard to teach her about robotics and to convince her to be his assistant. At that moment, Daneel suggests that it is Gladia who has committed the murder and that her biological father Dr. Thool has hidden the weapon to protect her.

Yet Baley has his own solution, and with all the clues collected, Baley calls all the suspects for the 'résumé' of the evidence in the grand climactic scene in which everyone is present by trimensic projection –viewing- instead of physical presence. Baley goes down the list of suspects and recounts each of their motives and opportunities for the murder before he accuses Leebig. Baley concludes that Leebig, Solaria's best roboticist, is actually the murderer. In love with Gladia, he has been stung when she has refused to be his assistant, and he hated Delmarre because he had discovered that his roboticist friend Leebig was working on certain new developments in robot design that would make robots allow harm to human beings. Delmarre refused to go along with his radical plans and he was even about to reveal them to the security authorities. One of the developments Delmarre had discovered is Leebig's experiments to create spaceships with built-in positronic brains that could be instructed to attack other ships and even other worlds under the assumption that those ships contain only robotic brains and the worlds are uninhabited. According to the plan, a few men on Solaria could easily and successfully take over both Earth and the other Outer Worlds. As Baley suggests, Leebig has murdered Delmarre by creating a robot with detachable arms and one of these arms has been used as the murder weapon and then reattached. Leebig has instructed the robot to give Gladia its arm during the moment when she was furious at her husband, and with a weapon in her hand she has acted in a temporary blackout of consciousness before either

Delmarre or the robot could stop her. Killing Delmarre in such a way as to cast suspicion on his wife, Leebig hoped to avenge himself on both at once. And after the robot has witnessed the harm done to Delmarre, its positronic brain was damaged and the robot became incoherent. When Baley tells Leebig that an assistant is present at his house to put him under restraint, Leebig breaks down hysterically because he cannot stand the physical presence of another human being, and he eventually confesses that he has arranged Gruer's poisoning and the arrow meant for Baley by using robots, and that he has constructed the robot with detachable limbs. When Daneel appears in his house to arrest him, Leebig commits suicide and he prefers to die rather than endure being approached by what he thinks is a human being. After Leebig's suicide, Baley can successfully shield Gladia and he tells no one on Solaria of her part in the crime as he believes that she has been used by Leebig to kill Delmarre as methodically as he has used the robots in the attempts on Gruer's and Baley's lives, and therefore he considers her not guilty. Baley next arranges for her to immigrate to Aurora where she can forget the entire matter and explore a new life of gregariousness. His mission accomplished, Baley meets Gladia for the last time and they are separated in an emotional farewell scene before Baley returns to Earth. On Earth Baley reports to Undersecretary Albert Minnim in Washington the weaknesses and strengths of Solarians and the Solarian society and he explains the dangers that might come from the Outer Worlds. He finally asks to be sent to Aurora to find a way to keep Earthmen in balance with the other inhabited planets and also to resume colonisation of unsettled worlds. The last scene of the novel depicts Baley's discomfort at being back in the City which he finds as a strange and almost alien world. Baley has learned to live under the naked sun and he is now convinced that man must move out among the stars.

3.3.2. The Role of Robots and the Circumvention of the Laws of Robotics

As in *The Caves of Steel*, the mystery story in *The Naked Sun* serves to supply the action and to function as the structural element holding the novel together, but it does not constitute the chief focus of Asimov's interest in his speculation about the future of humanity. In this novel, Asimov's major concern is his science fictional setting of Solaria and its living conditions and culture which have the most pervasive effects on human characters and their psychology. In placing stronger emphasis on the science fiction elements instead of the mystery story, Asimov plays with two interrelated notions: the social customs of Solarians and a further elaboration and development of robotics. While Baley's home planet Earth is concerned and afraid of competition from robots, Solaria is overrun by them, specialises in their production, and exports various models to the other Outer Worlds. Solarian robots play an important role in this fictional world, not as individual robot characters but as a type of fictional characters representing technology and its impact on humanity in the future. Even Elijah Baley has still other reasons for his presence on Solaria; he has been asked by Undersecretary of Justice Albert Minnim to observe the conditions and situation of that Outer World and to gather information because Earth's sociologists have predicted that the Outer Worlds would wipe out Earth and exterminate its inhabitants. Suspicions about the Spacers' plans have intensified since no Earthman has ever been allowed to visit the Outer Worlds, and therefore Earth knows only their strengths, but never their weaknesses. Minnim instructs Baley:

> *You will be on Solaria on their invitation, doing a job to which they will assign you. When you return, you will have information useful to Earth ... No question of spying ... Just keep your eyes and mind open. Observe! There will be specialists on Earth when you return to analyze and interpret your observations (10)*

Minnim explains the situation on Earth, asserting that

> *One of the factors that conspires to keep us in that position is ignorance ... The Spacers know all about us ... We know nothing about them except what they tell us ... Our sociologists have been coming to certain conclusions concerning the present Galactic situation ... Eventually we will become too great a danger to the Outer Worlds to be allowed to survive. There are eight billions on Earth who hate the Spacers ... and within a century Earth will be virtually wiped out as a populated world. So the sociologists say (19-11).*

And therefore Minnim urges Baley,

> *Bring us information ... We know their strengths and only their strengths. Damn it, they have their robots and their low numbers and their long lives. But do they have weaknesses? Is there some factor or factors which, if we but know, would alter the sociologic inevitability of destruction; something that could guide our actions and better the chance of Earth's survival? (12).*

Likewise, Baley's partner Daneel Olivaw is also sent to Solaria, not only to help Baley and give him the prestige of being associated with a Spacer (Daneel passes as an Auroran human), but in reality he is also there because the Aurorans themselves are concerned about the political and technological developments on Solaria, and they suspect that Solaria might threaten not only Earth but also the other Spacer Worlds. Baley easily discovers the motives of the Aurorans and the reasons for choosing a robot to pass as human instead of a real man. During the first interview with Hannis Gruer, Baley notices Gruer's furtive glances in the direction of Daneel and he thinks,

> *Why should Daneel pretend so thoroughly to be a man? ... It seemed obvious now that the masquerade was something more serious ... Did Gruer suspect the motives of Daneel? Baley, himself, had been ordered to keep his eyes open and Daneel might very likely have received similar instructions. It should be natural for Gruer to suspect that espionage was possible. His job made it necessary for him to suspect that in any case when it was conceivable. And he would not fear Baley overmuch, an Earthman, representative of the least formidable world in the Galaxy. But Daneel was a native of Aurora, the oldest and largest and strongest of the Outer Worlds. That would be different (48).*

And when Gruer wants to tell Baley about the secret organisations on Solaria and their role in the murder, he asks Daneel to leave the room and he speaks to Baley alone: "He's an Auroran and he is here because he was forced on us as the price of having you ... There's something more to this than murder. I am not concerned only with the matter of who did it. There are parties on Solaria, secret organizations," and he concludes, "Not a word to the Auroran, please. Whatever this is about, Aurora may be involved ... They say they include Mr. Olivaw because he worked with you before, but it may well be that they wish a reliable man of their own on the scene" (89).

Moreover, Daneel plays a lesser part in ***The Naked Sun*** and he is absent for nearly half of the novel because Baley does not want to be encumbered by Daneel's concern about his safety and his objection to his going outside the mansion to carry out his investigation through "seeing". Programmed according to the Three Laws of Robotics, Daneel is determined to protect Baley from harm, and when Baley expresses his desire to make the car's top open to the sky during the trip to their residence, Daneel refuses and tells him,

> *I am sorry, but I cannot allow that ... I must explain that it is my first concern to spare you harm. It has been clear to me on the basis both of my instructions and of my own personal experience that you would suffer harm at finding yourself in large, empty spaces. I cannot, therefore, allow you to expose yourself to that (30).*

Baley manages to make the top of the car lowered by the driver, and soon Daneel tries to prevent him coming to harm:

> *He [Baley] had to see! He had to see all he could. And Daneel must be there with him to keep him from seeing. But surely a robot would not dare use violence on a man. That thought was dominant. Daneel could not prevent him forcibly, and yet Baley felt the robot's hands forcing him down (33).*

When they arrive to their residence, Daneel regrets the incident and tells Baley, "I regret that you have suffered harm despite my presence. The direct rays of the sun are damaging to the human eye. When you looked up, I was forced to pull you down and you lost consciousness" (34). Later, Baley decides to go outside to see Solarians in person, but he is energetically opposed by Daneel, who considers that the threat to Baley's safety is not only in the exposure to open spaces, but also in meeting Solarians who abhor personal contact with other human beings. Besides, Daneel fears that his partner could be the next victim after the poisoning of Hannis Gruer, who is the key Solarian figure in the investigation. Baley still insists on "seeing" Solarians and he tells Daneel, "Let them wear nose filters and gloves. Let them spray the air. And if it offends their nice morals to see me in flesh, let them wince and blush. But I intend to see them. I consider it necessary to do so and I will do so" (118). However, Daneel is determined to stop Baley even by using force, and he says,

> *But I cannot allow you to ... If I permit you to proceed in your plan for exposing yourself indiscriminately in actual person, the next victim will necessarily be you yourself. How then can I possibly permit you to leave the safety of this mansion ... Even if I must hurt you. If I do not do so, you will surely die (119).*

Through this image of the robot being so concerned about the safety of a human being, Asimov presents an exemplary robotic nature that highlights the positive aspect of advanced technology. However, Baley feels that his freedom is limited as though the robot is his master, and although he is pleased at the resumption of their partnership, in sharp contrast to his original objection in *The Caves of Steel*, he has become more assured in his dealing with robots and able to use them or not to use them as reason and circumstances dictate. Baley "felt annoyed at the other's 'concern'. He felt like a baby in the charge of its nurse" (27), and thus he refuses to

be treated as an infant submitted to the orders of a machine and "he couldn't allow this nurse-infant relationship to build up ... What he really wanted was an inner knowledge that he could take care of himself and fulfill his assignment" (32, 36). Convinced that Daneel is merely a useful tool to use whenever necessary, Baley resolves to reveal the true identity of his partner to the household robots, and he orders them to keep him in custody and not to let him establish any contact with humans or other robots either by viewing or seeing. In the process, Baley makes it clear to Daneel that "even if I were walking into danger, which I am not, it would only be my job ... It is as much my job to prevent harm to mankind as a whole as yours is to prevent harm to man as an individual" (124). Indeed, Baley believes that a robot is only logical and never reasonable and is not able to make out conclusions and predictions out of the various circumstances; he thinks that "logic was logic and robots had nothing else. Logic told Daneel he was completely stymied. Reason might have told him that all factors are rarely predictable, that the opposition might make a mistake" (124).

Baley is finally free; he gives Daneel the slip and goes off on his way for data collecting and interviewing suspects, and only when he rejoins Daneel near the end of the novel does he say why he has been insisting on seeing rather than viewing and why he has had to get away from Daneel. Although Daneel gives a solution to the murder early in the novel –accusing Gladia of murder and Dr. Thool of hiding the weapon- Baley does not approve this thesis and considers Daneel's solution logical but not reasonable. And as far as the motives of Daneel's presence on Solaria are concerned, Baley believes that "The planet, Aurora, had its reasons for sending a robot as representative of their interests, but it was a mistake. Robots had their limitations" (236). When Daneel says, "I have not always found human behaviour

logical," Baley ironically replies, "We need Three Laws of our own, but I'm glad we don't have them" (236). This attitude toward robots seems to explain why Asimov does not use Daneel to good effect in *The Naked Sun,* and even the lack of a farewell scene between Baley and Daneel, like the one in *The Caves of Steel*, can be interpreted as an admission of the superiority of man over the robot which is more pronounced in this novel.

However, Asimov's interest in *The Naked Sun* is not so much centred on Daneel as an individual robot as on the Solarian robots that represent the highly developed technology of robotics on this Outer World. With ten thousand robots for every human on the planet, Solaria possesses the most advanced robot economy in the Galaxy, and this makes Baley remark, "Two hundred million robots! So many among so few humans. The robots must litter the landscape. An observer from without might think Solaria a world of robots all together and fail to notice the thin human leaven" (29). Solarian robots are the only means for the survival of their human masters; not only do they serve them by doing all kinds of work, they also help rear the Solarian children and raise them to be good and proper Solarians who consider human contact repugnant. Moreover, Solarian robots are highly specialised, and each category has a specific task to perform under the sanctity of the Three Laws of Robotics on which the Solarians' safety and peace of mind is dependent. And because of their limited number and the large estates on which they live, Solarians have developed an unusual skill at working and living with robots, with the result that they have developed the neurosis of not enduring the personal presence of another human being and they have substituted actual meeting in person with the technological device of viewing through holographic projection. In reaction to the overwhelming presence of robots in the mansion and the way they perform all tasks

without allowing human interference, Baley feels annoyed and finds the situation extremely exasperating that he often expresses his resentment and uneasiness while dealing with them. When Daneel introduces Baley to the great number of robots in the residence, telling him that this is customary on Solaria, Baley says in annoyance, "What do these Solarians do for themselves? ... I wonder now why a robot didn't scrub my back in the shower" (46). Baley gets more distressed at the idea of robots doing everything for him, and he tells Daneel while in the bathroom, "If a robot comes in to shave me, send him out again. They get on my nerves. Even if I don't see them, they get on my nerves" (50). Later when Baley attempts to establish contact with Gladia through the "trimension" screen without the help of the robot designed for the task, Daneel urges him not to interfere with the robot's work, and he makes it clear to Baley that "almost never does a Solarian interfere with the day-to-day workings of a robot," and if this happens,

> *The experience which the robot undergoes is as upsetting to it as pain to a human ... Consider, too, that to cause distress to a robot might be considered on the part of our hosts to be an act of impoliteness since in a society such as this there must be a number of more or less rigid beliefs concerning how it is proper to treat a robot and how it is not (57).*

Baley reluctantly agrees to let the robot do his job, but he thinks, "It was an educational example of how remorseless a robotic society could be. Once brought into existence, robots were not so easily removed, and a human who wished to dispense with them even temporarily found he could not" (57).

In his discussion with the Solarian sociologist Dr. Quemot over robots and their role in Solarian society, the sociologist reveals that the positronic robot is the symbol of the Spacers' superiority over Earthmen because robots have allowed Solarians to be a leisure class, and that it is also a Solarian economic weapon since the planet is the source of advanced models for the other Outer Worlds and thus Solaria cannot be

harmed by them. Yet Baley' attitude toward robots taking over and invading and controlling human life does not change even though they respect the Three Laws of Robotics, and when a robot suddenly comes to Baley within few seconds of Quemot's disappearance from the holographic projection,

> *Baley wondered once again how these creatures were managed. He had seen Quemot's fingers move toward a contact as he had left and that was all. Perhaps the signal was quite a generalized one, saying only "Do your duty!" Perhaps robots listened to all that went on and were always aware of what a human might desire at any given moment, and if the particular robot was not designed for a particular job in either mind or body, the radio web that united all robots went into action and the correct robot was spurred into action. For a moment Baley had the vision of Solaria as a robotic net with holes that were small and continually growing smaller, with every human being caught neatly in place. He thought of Quemot's picture of worlds turning into Solarias; of nets forming and tightening even on Earth (150-151).*

On the other hand, Baley's uneasiness with the advanced robotic technology on Solaria is greatly supported by the way Asimov develops further implications in the Three Laws of Robotics which he examines in a new direction that goes in contrast with his earlier blind faith in technology. Obviously, the First Law is the key one, and what the novel effectively explores is the destruction of that First Law by showing that robots can commit murder, and more precisely that a well-trained roboticist or simply a human being can commit murder by using two or more robots in combination, and each robot performs an action which is innocent in itself. In this respect, one robot is given an order, a second robot is given a second order related to the first, and the two robot actions result in murder carried out against a human being. So the murder plots of both *The Caves of Steel* and *The Naked Sun* are symmetrical. In *The Caves of Steel*, a robot is used to carry the blaster through open space and hand it to Enderby to kill Dr. Sarton because an Earthman cannot cross open country and a robot cannot kill with the First Law. In *The Naked Sun*, there is

one murder and two attempts of murder, and with regard to the culture and habits of Solarians, no Spacer can tolerate the proximity to another human to commit a murder, and no robot can violate the First Law and allow harm to a human. Therefore, the clever use of robots is the crux of the crimes: instructing one robot to put poison into water and another to give the water to Hannis Gruer without knowing it would cause him harm; instructing a robot to hand a child a poisoned arrow and to tell him that Baley is a dirty and disease-ridden Earthman (furnishing the motive); and finally instructing a robot with detachable arms to hand Gladia its arm when she is overwrought in a quarrel with her husband. While interviewing Leebig over his work with Rikaine Delmarre on robotics, Baley comes out with his theory about the First Law which shocks Leebig because he has been dealing with projects involving the circumvention of that Law. Baley believes that "throughout the history of the positronic robot, the First Law of Robotics has been deliberately misquoted ... to hide the fact that robots can commit murder" (189-190), and he proposes, "Now let's recite the First Law as it should be stated: A robot may do nothing that, *to its knowledge*, will harm a human being; nor, through inaction, *knowingly* allow a human being to come to harm" (195). Then Baley suggests how a crime can be committed using a combination of robotic actions:

> *Suppose a man says to a robot, "Place a small quantity of this liquid into a glass of milk ... After you have performed this action, forget you have done so." ... Now a second robot has poured out the milk in the first place and is unaware that the milk has been tampered with. In all innocence, it offers the milk to a man and the man dies (195-196).*

This implies that the factor of "ignorance" or not knowing that an action is harmful to a human is a decisive one in the act of committing a murder, and therefore "the robots would have been the immediate murderers, though, the instruments of

murder" (196), as Baley concludes. Leebig himself admits that "Robots would have to be ordered very cleverly in order to circumvent the First Law" (197).

In addition, Baley learns that Leebig has been working with Dr. Delmarre to develop robots capable of disciplining children, an action which could ruin a robot's positronic brain, and thus it must involve a weakening of the First Law. Leebig argues, "A child is disciplined for its own future good," and yet he acknowledges that building such a robot with a weakened First Law is impossible, and he asserts that he is not "likely to succeed. Nor anyone" because

> *Pain inflicted by a robot on a child sets up a powerful disruptive potential in the positronic brain. To counteract that by anti-potential triggered through a realization of future good requires enough paths and bypaths to increase the mass of the positronic brain by 50 percent, unless other circuits are sacrificed (188-189).*

However, the most dangerous project in robotic manipulation Baley discovers is Leebig's experiments to build unmanned spaceships with built-in positronic brains that could attack and conquer other worlds in the Galaxy, including Earth. Actually, it was when Dr. Delmarre discovered Leebig's secret plans for purposes of conquest that he decided to break off and stop cooperation with him and uncover his dangerous experiments. It is indeed Leebig's statement, in which he wonders, "Why have a robot manipulate controls when a positronic brain can be built into the controls itself" (197-198), that gives Baley an insight into Leebig's secret plan and that eventually leads to disclose the motive for the act of murder. In the final climactic scene, Baley unveils Leebig's whole project to the Solarians he has gathered,

> *Consider a spaceship with a built-in positronic brain as compared to a manned spaceship. A manned spaceship could not use robots in active warfare. A robot could not destroy humans on enemy spaceships or on enemy worlds. It would not grasp the distinction between friendly humans and enemy humans ...*

> *But a spaceship that was equipped with its own positronic brain would cheerfully attack any ship it was directed to attack. It would naturally assume all other ships were unmanned ... With no room necessary for crewmen, for supplies, for water or air purifiers, it could carry more armor, more weapons and be more invulnerable than any ordinary ship. One ship with a positronic brain could defeat fleets of ordinary ships ... It would take a real expert in robotics, such as you, Dr. Leebig, to handle them properly in that case (252-253).*

Following Baley's accusations, Solarians are shocked and aghast at this perversion of robot psychology because they are surrounded by robots, and their lives depend fully on robots' devotion and the safety assured by the Three Laws of Robotics. So they all turn on Leebig and Leebig himself crumples and admits his guilt when Baley tells him that Daneel, who has been masquerading as a human, is present at his house to put him under restraint.

Although robots in *The Naked Sun* symbolise the Spacers' superiority over Earthmen, Asimov tends in parallel to examine the flaws of the technology of robotics and to demonstrate that the determination of robots to obey the Three Laws of Robotics depends primarily on what they know, with the result that a clever manipulation by a human being can play on their literal mind and ignorance to commit murder or wage war. Significantly, robot characters in the novel are not treated individually (they do not even have names as Daneel has, but serial numbers), but as a category representing technological products that can have serious dangers and threats to humans. In fact, after years of writing about robots, Asimov admits through *The Naked Sun* that no matter how beneficial technology is and no matter what kind of safeguards are involved, it can be used for illicit purposes by some, and as Jean Fiedler and Jim Mele claim,

> *Technology is an ambiguous blessing, no matter who or what controls it. This is a perception Asimov seemed to gain as he wrote about and considered the many undesirable permutations of robotic action possible within the constrictions of the Three Laws (Fiedler and Mele 1982: 48).*

In reality, it seems that Asimov tends in this way to touch on the attitudes of Americans during the 1950's towards technology and automation which they considered thrilling and threatening the American landscape with unforeseen consequences. Solaria echoes perfectly technophobia's worst fears, the development of a world of an automated utopian perfection that has resulted in a complete dependence on technology and robots even in committing murder and making war. Leebig refers to Earth's fears of robots, and he tells Baley,

> *Do you know robots started with a Frankenstein complex against them? They were suspect. Men distrusted and feared robots ... The Three Laws were first built into robots in an effort to overcome distrust and even so, Earth would never allow a robotic society to develop. One of the reasons the first pioneers left Earth to colonize the rest of the Galaxy was so that they might establish societies in which robots would be allowed to free men of poverty and toil. Even then, there remained a latent suspicion not far below, ready to pop up at any excuse (191-192).*

In accordance with the new environment on Solaria in which advanced technology and robotics play the major role, Solarian characters are treated collectively, lacking individual personality traits, although they live separately far from each other on large individual estates. Indeed, they appear as having little more emotion than their robots, and they can clearly be identified with emotionless thinking machines. What Asimov explores in *The Naked Sun* is not only the changing conditions of life on the planet as a result of advanced science and technology, but also and mostly important the evolution of man and his response to the new environment he has created. Obviously, because of their limited number, their huge estates, the absence of cities, the development of robotics and trimensic viewing, Solarians have had fewer reasons for personal contact, and therefore they have gradually developed a pride in never seeing each other which has eventually developed into a severe neurotic disease. Throughout his investigation, Baley learns

about the customs of Solarians and their psychology, and this is the reason for which he insists on having personal contact with them instead of viewing. All the suspects Baley invites to meet personally refuse neurotically to see him because they cannot endure physical presence of another human being. After his experience with Solarians, Baley recalls,

> *I saw or tried to see several people. An old sociologist tried to see me and had to give up midway. A roboticist refused to see me at all even under terrific force. The bare possibility sent him into an almost infantile frenzy. He sucked his finger and wept. Dr. Delmarre's assistant was used to personal presence in the way of her profession and so she tolerated me, but at twenty feet only ... It all fits into a pattern of psychosis (225-226).*

The most striking illustration of that psychosis is the case of Leebig who confesses everything only to keep Daneel away, and then he commits suicide preferring rather die than be that closer to another person.

Moreover, certain social customs have developed to reinforce the psychological situation of Solarians; for instance, the language used by Solarians reflects the personal contact taboo as they consider terms relating to affection, love, children, and even touching obscene and offending. When Baley asks Gladia about her marriage and whether she and her husband have children, she "jumped to her feet in obvious agitation. 'That's too much. Of all the indecent ... It's not a thing one talks about'" (65). And during his visit to the "fetal" farm, Baley is surprised by Klorissa's reaction when he wonders how robots can fulfill the children's need for affection. Klorissa annoyingly says, "Babies need attention ... If you're trying to shock me by using unpleasant terms, you won't succeed" (116), yet "Baley did not trouble to dispute the matter of obscenity," and he replies, "I can use the word too. Affection! Do you want a short word ... I can say that. Love! Love! Now if it's out of your system, behave yourself" (166). Even the children who are reared on the farm are

educated by robots to be proper Solarians; in other words, to thwart their instincts as human beings as they grow resenting personal contact and learn the social customs of their parents whom they are not allowed to know. According to Klorissa's argument, "There isn't an instinct around that can't give way to a good, persistent education ... In fact, if you go about it right, education gets easier with each generation. It's a matter of evolution" (167). Later, Klorissa explains to Baley that when children graduate (become young), they go to live on estates of their own to replace the dead Solarians, and for the necessity of making children again, couples are matched, though living separately on their own estates, by gene analysis to have healthy children. Solarians do not like the notion of marriage because it involves feelings and affection, and Klorissa refers to the relationship by stating, "To be married? They never are! It's a very traumatic process" (172). Besides, Klorissa answers Baley's question about if they do not like their partner, "If the gene analysis indicates a partnership what difference does it _" (173), and she adds, "We all have all we can want, so there is no personal ambition. We have no knowledge of relationship, so there is no family ambition. We are all in good genetic health" (179-180). Thus marriage according to Solarian customs involves neither affection nor sex, and procreation is achieved by laboratory fertilisation, and even Dr. Delmarre, who is described as a good Solarian (cold and unaffectionate) considers that "marriage was the hardest thing in life, but that it had to be endured" (183).

As far as the relationship between Gladia and Leebig is concerned, Leebig considers that speaking about finding her physically attractive is disgusting, and he calls Baley, who asks him about their relationship a "filthy animal" (202), because expressing such emotional traits on Solaria represents a regression to the animal stage. Gladia, on the other hand, fails to understand the feeling of jealousy when

Baley asks about her husband's reaction to her frequent viewing with Leebig, and whether Delmarre has ordered Leebig to stop paying further attention to her. Gladia wonders in astonishment, "Why should he? Jothan isn't a robot and neither am I. How can we take orders and why should Rikaine give them" (184). Baley immediately realises that he should not bother to try to explain because "He could have done so only in Earth terms and that would make things no clearer to her. And if it did manage to clarify, the result could only be disgusting to her" (184). Baley finally realises that "living as they did, Solarians considered one another's private lives to be sacrosanct. Questions concerning marriage and children were in bad taste," but he also wonders, "Would no one commit the social crime of asking the suspect if she quarrelled with her husband" (204).

Another social custom that has developed as Solarians never see each other in person is the liberties they take in doing a lot of things while viewing, including eating, bathing, and shaving, and even nudity is not uncommon. In her first interview with Baley, Gladia appears fresh from the shower stall, and when Baley and Daneel appear shocked at the scene, she excuses her nudity as "only viewing", and she explains, "You're viewing me right now. You can't touch me, can you, or smell me, or anything like that. You could if you were seeing me. Right now, I'm two hundred miles away from you at least ... You don't see me. You see my image" (63). Gladia provides the same excuse when she tells Baley about her frequent viewing in free motion with Leebig (viewing while walking outside without losing contact) as she wears very little and "sometimes just sandals so you can feel the air every inch ... but it was viewing" (213). In contrast, on the rare occasions when persons meet, they are fully clothed to gloves, they have nose filters to prevent smelling, and they stand far from each other. Gladia and Klorissa come to see Baley in full clothes, and

sociologist Dr. Quemot appears with his costume and gloves, and yet he expresses his feelings of discomfort and dread as he says,

> *I imagine I can smell you ... I cannot say whether you do have an odor or how strong it is, but even if you had a strong one, my nose filters would keep it from me. Yet, imagination ... It's worse. You'll forgive me, Mr. Baley, but in the actual presence of a human, I feel strongly as though something slimy were about to touch me. I keep shrinking away. It is most unpleasant (130).*

Accordingly, the way human characters are depicted in ***The Naked Sun*** clearly shows and provides evidence that Asimov adopts the view of human evolution as stated in the Darwinian theory and referred to in various instances in the novel by Solarian experts (Klorissa and Leebig); humans, like the rest of the natural world, are not fixed in form or function, they are rather constantly changing and evolving, and they are shaped and determined by their physical environment. Indeed, Asimov creates an alternate setting, a society whose fabric is woven by science and technology and ruled by robotics, and then he explores the habits of thinking and behaviour and the customs that would develop in that setting. Therefore, the Solarian environment with its robotic population and labour is presented as the strongest character in ***The Naked Sun*** while Solarians become subordinates, robot-like creatures, who have lost insight into the nature of humanity and who lack the personality traits that characterise every individual human.

Although Spacers have long been considered the superior beings of the Galaxy with their advanced science and technology, Baley is called from the under-developed Earth to help them solve the murder mystery, and he soon becomes a leader on this planet only because he comes from a world that refuses to accept their axiom that a robot can do it better. Even R. Daneel, who shared the spotlight with Baley in ***The Caves of Steel***, is eclipsed in ***The Naked Sun*** and is not used in an effective way. This speculation on the evolution of man and his interaction with

technology is carefully woven into the overall design of the novel to reveal the perils and dangers of technology and the consequences of overdependence on it. Back on Earth, Baley reports to Undersecretary Albert Minnim the unknown weaknesses of Solaria, and he summarises his notes about the Solarian society as follows:

> *Their weaknesses, sir, are their robots, their low population, their long lives … The Solarians have given up something mankind has had for a million years; something worth more than atomic power, cities, agriculture, tools, fire, everything; because it's something that made everything else possible … Cooperation between individuals. Solaria has given it up entirely. It is a world of isolated individuals … The only science that really flourishes on Solaria is robotics … Without the interplay of human against human, the chief interest in life is gone; most of the intellectual values are gone; most of the reason for living is gone (259-260).*

And in comparing Earth to Solaria, Baley comes to the conclusion that Earth is "Solaria inside out" (256); they are plagued with different problems, but they are both faced with destruction not as immediate but just as certain. Earth with its abhorrence of robots worships humanity and rejects technology while Solaria excludes humanity and Solarians abrogate all responsibility by accepting the unquestioned supremacy of technology. Accordingly, Baley believes that both worlds are doomed to eventual extinction. In this respect, Asimov's development of characterisation is subordinated to his science fictional setting and theme which are concerned with the future of humanity in light of the great social, economic, and technological changes that might take place in future societies. Although most of the characters in ***The Naked Sun***, including robots, are depicted collectively as representatives of the equation of humanity versus technology, there is actually a deep psychological portrayal of human characters in their fears and preferences, and even in the way they tend to deny their instincts and repress their human feelings. However, the two persons who stand out as Asimov's most distinguishable and fully

developed characters are Elijah Baley and Gladia Delmarre, who both embody the novel's theme with their symbolic nature.

3.3.3. Baley and Gladia versus the Environment

As Solarians have become so accustomed to their limited numbers and vast estates so that they consider their way of life separate from one another the ideal state of living, Earthmen, long accustomed to living in their caves of steel, have accepted their agoraphobia as a natural condition. In *The Caves of Steel,* Earthman Elijah Baley's major concern is his partnership and friendship with a robot which he finally and eagerly accepts, reflecting the necessity of interaction between man and his technology for the future good of humanity. But when he learns about his mission on a distant Outer World, whose environmental conditions are so different from those on Earth, his concern shifts to fighting his agoraphobia and learning to adapt to the new environment. Thus Daneel Olivaw is out of sight in most parts of the novel to allow Baley to act and to experience life on Solaria to which he is not accustomed. In dealing with Baley's battle against his agoraphobia, Asimov explores the interior Baley, probing his phobia, his desires, his internal strengths, and even his superiority over Daneel is strongly articulated, stressing the human ethic against the over dominance of technology.

From the beginning of the novel, two principal images, contrasting the closed and open spaces, appear as the key symbols of Baley's battle in overcoming his phobia. These images are the walls and the naked sun. Baley's panic begins first at the thought of going outside the City womb and leaving the protection of the New York City walls. Before leaving to Solaria, Baley must fly to Washington and the plane trip would not expose him to open air:

> *The take-off would be from the New York Runway Number 2 which, like all official Runways, was decently enclosed, with a lock opening to the unprotected atmosphere only after air speed had been achieved. The arrival would be at Washington Runway Number 5, which was similarly protected (1-2).*

The airplane has no windows, but there are all necessary conveniences; for instance, a news-strip unrolls continuously at eye level with news, humorous article and short fiction to distract passengers. Baley tells himself,

> *I'm enclosed. This plane is just a little City.*
>
> *But he didn't fool himself. There was an inch of steel at his left; he could feel it with his elbow. Past that, nothing –Well, air! But that was nothing, really. He almost wished he could see straight down, glimpse the top of the buried Cities he was passing over ... all comfortable and warm with the evidence of man (3).*

Arriving at the airport of Washington, Baley is happy and comfortable because "the sound and clamour of life, the huge vaulted chamber of the airport with City corridors leading off on numerous levels, everything else he saw and heard, gave him the feeling of being safely and warmly enclosed in the bowels and womb of the City" (4). After the meeting with Undersecretary Minnim, Baley goes to the spaceship, a Spacer vessel, to travel to Solaria, and for the first time in his life, he experiences an Earth night and open space; he "shivered spasmodically in the raw, open air" (13), and yet he does not feel it so bad because "the night closed in ... like dark black walls melting into a black ceiling overhead" (13). During the trip, Baley feels protected again; the spaceship is all enclosed like a small City and even larger than an airplane, and when the robot assigned to accompany and serve him on the vessel shows him how to open the ports in case he wishes to view space, "Baley said with some agitation, 'That's all right, boy. Leave the ports closed'" (15). However, the first crisis comes when Baley learns that the spaceship will land on Solaria in daylight. Baley is immediately thrown into a state of panic and intense fear at the thought of

having to step out onto the unprotected surface of a planet in daytime; he wonders, "Where would there be safety now? Not even the false walls of darkness" (17).

At this stage, Baley's battle against his agoraphobia starts, and Asimov depicts him passing through successive stages in his attempts to conquer his fears and panic. Before landing on Solaria, Baley tries to contain his panic, and "because he would not display weakness before the Spacers ... he stiffened his body against the webbing that held him safe against the forces of deceleration, closed his eyes, and stubbornly fought panic" (17). He tries to persuade himself that being in the open is only natural, and he tells himself, "Men live in the open all their lives. The Spacers do so now. Our ancestors on Earth did it in the past. There is no real harm in wall-lessness. It is only my mind that tells me differently, and it is wrong" (18). Yet, in spite of all efforts, Baley does not succeed in resisting his longing for the protection of walls, and he feels that "reason was not enough ... all that did not help. Something above and beyond reason cried out for walls and would have none of space ... Baley was losing his fight" (18). Because of Baley's social and cultural conditioning, Daneel anticipates Baley's neurosis and he arranges for an air-tube used in space to connect vessels and a ground car for fear of the harm that Baley might suffer from being exposed to the open. Baley resents Daneel's concern about his neurosis and he feels "a sudden need to see" (30), motivated partly by his personal desire to experience the unprotected Outer World, and partly by Minnim's instructions to observe and collect information. Asimov tells us that "Data collected from a Spacer's words ... was the sort of thing that was already available to Earth's sociologists. What was needed was direct observation and it was his job, however unpleasant, to collect it" (29-30), and also "he did want to see out the car. It was becoming an obsession with him" (31-32).

In addition to his fear of wall-lessness, Baley's concern is also his exposure to the naked sun, and thus he has to trick the robot driver –it does not know about Earthmen's agoraphobia- into opening the top of the car and exposing him to the open sky. This first contact with the open is hard to endure for Baley:

> *Baley wanted to shut his eyes in initial terror, but fought the sensation. He faced the enormous wash of blue and green ... He could feel the undisciplined rush of air against his face ... Blue, green, air, noise, motion –and above it all, beating down, furiously, relentlessly, frighteningly, was the white light that came from a ball in the sky. For one fleeting split moment he stared directly at Solaria's sun. He stared at it, unprotected by the diffusing glass of the Cities' uppermost-level sunporches. He stared at the naked sun ... His mind crowded with thought during that unreal whirling moment. He had to see! He had to see all he could (33).*

In spite of Daneel's attempt to protect him and keep him safe, Baley loses consciousness after having stared too long at the sun. At this stage, Asimov makes Baley's neurosis appear so crippling, but he also presents him with a stubborn determination and need to face his fears and conquer his panic: "The sight and feel of the open had been hard to take ... His face grew grim even at the glancing touch of that thought. He would face air, sun, and empty space yet!" (36). At one moment, when Baley pictures the house built for him and Daneel, he thinks of his apartment in New York City and of his wife Jessie, a thousand light years away, and he wishes there were a tunnel from Solaria to Earth so he could walk back to Earth, "back to Jessie, back to comfort and security" (47). That thought does not, however, make him renounce his determination to go out and leave the protection of the enclosed walls. Daneel continues his efforts to protect Baley from his weaknesses, trying to persuade him to stay within the house and to carry out his investigation by trimentional projection, but Baley insists on leaving the mansion and on meeting Solarians in person. He finally finds the solution to get rid of Daneel's control and hampering instructions, and he firmly says, "The open space won't kill me, if I do

find it necessary to see anyone. I'll survive. I may even get used to it" (118). After putting Daneel under restraint in the mansion, Baley leaves the house for the first time, and he finds himself in an airborne vessel again taking him to see sociologist Anselmo Quemot, but the vessel has transparent windows. Baley fights his distress and he tries to maintain self-confidence:

> *He had begun by stepping across open ground to the waiting plane with a kind of lightheaded dizziness that was almost enjoyable, and he had ordered the windows left unblanked in a kind of manic self-confidence. I have to get used to it, he thought, and stared at the blue until his heart beat rapidly and the lump in his throat swelled beyond endurance (126).*

Nevertheless, Baley's confidence does not resist too long and his psychological disturbance urges him "to close his eyes and bury his head under the protective cover of his arms at shortening intervals. Slowly his confidence trickled away" (126). And when he arrives at Dr. Quemot's house, he asks him to blank out the windows, and during the interview, the parallel between the opposing fears of Baley and Quemot is clearly drawn as Baley's concern about blocking light from the window is matched with Quemot's growing neurosis about Baley's physical presence.

In the next scene, Baley goes to see Delmarre's assistant Klorissa Cantoro, and this time he is not too much bothered by the plane trip, but on arrival he expresses his desire to get indoors quickly. Again, Baley's desire is contrasted with Klorissa's fear of Baley's proximity, and she insists that he comes no closer to her than some twenty-five feet. Soon Baley asks to go outside again in order to observe the children playing in the farm, and he tells Klorissa, "I'm trying to grow accustomed to the outdoors" (169). Asimov describes Baley's reaction to the outdoors:

> *His teeth chattered when he tried to talk and he had to force his words out in little bits. It hurt his eyes to look so far at a horizon so hazy green and blue ... he avoided looking up at the empty blue, empty, that is, but for the piled-up white of occasional clouds and the glare of the naked sun. And yet he could fight off the urge to run, to return to enclosure (169).*

After this experience, Baley appears more able to control his fears and handle his neurosis, and he grows more determined to conquer them. On his way to Gladia' house,

> *For the first time Baley found himself not minding a plane flight through open space. Not minding it at all. It was almost as though he were in his own element. He wasn't even thinking of Earth or of Jessie ... He had been on Solaria only the better part of three days and yet it seemed forever. How fast could a man adapt to nightmare? (204-205).*

During the interview, Baley agrees to walk with Gladia outside, and his walk in the open is presented as the ultimate trial for him; he does not care about space and he no longer brings together the image of New York to sustain him:

> *Space was large, space was lonely, yet he found it drawing him. His mind pictured himself striding the surface of a world with thousands of miles and light years of room all about him. Why should he find attraction in this thought of loneliness? ... He wanted Earth and the warmth and companionship of the man-crammed Cities. The picture failed him ... and found he could remain conscious only of the quiet, air-moving chill of the surface of Solaria (212).*

The time is late afternoon and Baley faces the movement of the sun; he finds himself staring at it as it rests at the horizon and he has a vision of the planet's surface spinning rapidly and madly under the naked sun. Actually, it is his head that is spinning and Baley faints, and once inside the house with Daneel, still weak from his sunset experience, he walks to the window and lifts the curtain to look out into the night. Daneel, who succeeds to break out to come to Baley's help, takes the curtain out of Baley's hand and reminds him of what he calls the cumulative effects of being exposed to the sun when he was with Gladia. At this moment,

> *A revolution took place within him. He snatched the curtain back, yanking it out of Daneel's grasp. Throwing his full weight against it, he tore it away from the window, leaving shreds behind ... He stared out the window. There was nothing to see, only blackness but that blackness was open air ... and he was facing it. And for the first time he faced it freely. It was no longer bravado, or perverse curiosity, or the pathway to a solution of a murder. He faced it because he knew he wanted to and because he needed to. That made all the*

> *difference. Walls were crutches! Darkness and crowds were crutches! He must have thought them so, unconsciously, and hated them even when he most thought he loved and needed them (233-234).*

Finally, Baley's fight against his agoraphobia comes to a resolution; he feels a sense of victory that allows him to come at the same time to the solution of the murder mystery:

> *He felt himself filling with a sense of victory, and as though victory were contagious a new thought came, bursting like an inner shout. Baley turned dizzily to Daneel … "I know what happened to the weapon; I know who is responsible. All at once, everything falls into place" (234).*

Actually, with each incident, Baley grows more able to master his deepest apprehensions, and at the same time that he solves the murder case, he becomes another person, a better one who returns to Earth and feels that "it was all strange to him. He couldn't make himself fit back in. He had gone out to solve a murder and something had happened to him" (268). Baley feels and recognises the change within himself even before leaving Solaria; indeed, the night before holding the climactic scene, he tries to sleep and suddenly the image of Earth invades his mind; he thinks of "Earth! New York! Jessie and Ben! The comfort and familiarity and dearness of home! He dwelt on it, half asleep, and the thought of Earth failed to conjure the comfort he expected. There was an estrangement between himself and the Cities" (236). Back on Earth, Baley reveals to Minnim the significance of his own experience, asserting the possibility of emigration and colonisation of unsettled planets in the Galaxy to leave the enclosed environment to which humans are confined. According to Baley, his successful experience demonstrates that what he can do others on Earth can do, and "there must be millions on Earth who would feel that same urge, if the open were only brought to their attention, if they could be made to take the first step" (268). Baley is now deeply convinced that his attraction to the open since his arrival on Solaria is not dictated by the professional necessity of

solving a crime and gathering data; it rather comes out of the urgent need of a human to go out for the salvation of humanity, and it is "only on that last evening on Solaria, with the curtain tearing away from the window, did he realize his need to face the open for the open's own sake; for its attraction and its promise of freedom" (268).

Therefore, Baley conquers his fears and neurosis for all Earthmen, and as a representative of the human ethic, he thinks that Earthmen are better suited than Solarians for colonisation in order to keep a reasonable balance between human values and the overwhelming technological progress, because, from what he has learned on Solaria, the other Outer Worlds "may become Solarias someday" (265), threatening the whole Galaxy with destruction. Baley claims that "the Spacers made us feel inferior and we hide from them. That's no answer," and then he resolves, "to avoid the destructive rhythm of rebellion and suppression, we must compete with them ... lead them, if we can. To do that, we must face the open; we must teach ourselves to face the open. If it is too late to teach ourselves, then we must teach our children. It's vital!" (266). Baley thinks of his son Bentley "standing on some empty world, building a spacious life. It was a frightening thought. Baley still feared the open. But he no longer feared the fear! It was not something to run from, that fear, but something to fight" (267). Naturally, that fear of the open still haunts Baley because Asimov, being a realist about human psychology, did not want to work a miracle and make his character change completely through a short period of time. Even though, while retracing his experiences with the open and the naked sun on Solaria, Baley realises that he is a new man, born from the womb of the Cities which are now alien to him; he no longer fits in on Earth,

> *He had told Minnim the Cities were wombs, and so they were. And what was the first thing a man must do before he can be a man? He must be born. He must leave the womb. And once left, it could not be reentered. Baley had left*

the City and could not reenter. The City was no longer his ... And it would be so for others and Earth would be born again and reach outward (268-269).

The last words of the novel depict Baley going through a reverie he understands that it would be real one day: "He lifted his head and he could see through all the steel and concrete and humanity above him. He could see the beacon set in space to lure men outward. He could see it shining down. The naked sun!" (269).

More significant, Baley's successful experience on Solaria does not only stress the ability of humans on Earth to change and adapt to a new environment and new conditions for the future good of humanity, but it does equally assert the superiority of Earthmen and their human values incarnated by Baley's character. Indeed, the traits of Baley's strong personality and his determination to affirm his identity as a human in the face of a technology-controlled society peopled by an army of robots and robot-like Solarians are strongly highlighted throughout the novel. Baley dismisses his robot partner and despises Solaria's robots, asserting that they are not "reasonable" and they cannot be relied upon to replace humans in dealing with human affairs. Besides, Baley's presence itself on Solaria to help in solving the murder case provides evidence of the weaknesses of such a society and of Solarians who find themselves submitted to the orders and instructions of detective Elijah Baley during the investigation. For example, when Baley asks the new Head of Solarian Security Attlebish for an official permission to see the Solarian suspects in person, Attlebish refuses on the grounds that this is unbearable, and even impossible, and he expresses his wish that Baley and Daneel depart from the planet. Baley's reaction comes immediately in the form of a menace, and he bursts in anger,

"Let me put it straight, Attlebish" **–Baley used the unadorned name with relish-** *"If you kick us off, the next deputation to visit Solaria will consist of warships. I'm from Earth and I know* **how the system works. Hurt feelings mean warships by return trip ... from now on, this murder investigation is**

> *going to be run my way. I'm in charge. I see the people I want to see. I see them. I don't view them" (114).*

After breaking contact with Attlebish, Baley is filled with pride and pleasure:

> *None of this had been planned. It had all been impulse born of his dream and of Attlebish's unnecessary arrogance. But now that it had happened, he was glad. It was what he had wanted, really –to take control ... He wished the entire population of Earth could have been here to watch. The man looked such a Spacer, and that made it all the better (115-116).*

Later, Baley receives a message of approval from Attlebish allowing him to arrange "seeing" interviews, and this represents for him the most important victory against the Spacers, "Attlebish had capitulated, even to the extent of putting the Earthman's name first. It was an excellent omen with which to begin" (125). After getting rid of Daneel, Baley is free and ready to go outdoors, and the sense of victory he feels makes him even more determined to go through the experience he has planned: "The ordeal was of his own choosing. His state of triumph, his unusual sense of freedom at having beaten down first Attlebish and then Daneel, his feeling of having asserted the dignity of Earth against the Spacers, almost demanded it" (126). So Baley goes on to solve the murder case, and through his experience he affirms Asimov's thesis of resuming humanity's exploration and colonisation of the stars because the uninhabited Galaxy is its own heritage, and not that of the Spacers, and because colonisation is the only way for its salvation.

Gladia's character, on the other hand, is not too much different from that of Baley, and her concerns are directly matched with Baley's own fears and neurosis, and even her own destiny is made complementary to that of Baley. In fact, Gladia appears as a principal character in the novel along with Baley for the role she plays in elucidating the novel's major theme concerning the future of humanity in spite of the differences between their home planets, Earth and Solaria. For the sake of

lending depth to the character of Gladia, Asimov displays more interest in endowing her with individual personality traits lacking in the other characters of the novel. Gladia, primer suspect and wife of the murdered man, is presented as a sensuous, spirited and even seductive woman who shows her interest in Earth and who would thrive for human contact in spite of her upbringing and the coercive conditions she is surrounded with on Solaria. In her first encounter with Baley through viewing, she lets him know that "I've read a lot about Earth. I've always been interested" (68). Her first image when she appears in the nude out of her shower stall embodies a kind of allure that Daneel interprets as an attempt to seduce Baley and make him predisposed to defend her and believe her innocent. Asimov describes her as an attractive woman,

> *she smiled and kept her glance fixed on Baley ... She lifted her arms above her head, running her fingers through the hair and spreading it out as though to hasten drying. Her arms were slim and graceful. Very attractive, Baley thought. Then he thought uneasily: Jessie wouldn't like this (60).*

And because of her behaviour, Daneel believes that "since she has studied Earth ... she discovered one weakness Earthmen possess. She must know of the nudity taboo, and of how such a display must impress an Earthman" (77). Although Baley rejects Daneel's hypothesis, he actually seems impressed by her physical attractiveness and charm, but he tells Daneel, "Regardless of what effect she might have had on me, I am still an officer of the law in full possession of my sense of professional ethics" (78). Unlike all Solarians who are devoid of human emotions and sensitiveness, Gladia displays deep feelings and sensitive responsiveness to the incident of her husband's murder. And though she is not much affected by her husband's death because "the husband-wife relationship on Solaria was something thin and shallow" (70), she does, in fact, respond emotionally when she is asked about the discovery of Delmarre's body,

She stopped suddenly and, to Baley's acute discomfort, she bent her head and wept ... Her eyes simply closed and tears slowly trickled down her cheeks ... Her shoulders barely trembled ... She had never seen a dead body before. She had never seen blood and a crushed skull ... Baley felt uncomfortable watching her as she sat there helpless, shivering, her face contorted with the absolute terror that had come over her with the memory (69-70).

Gladia's display of human emotions, in contrast to other Solarians, constitutes the key factor that explains Baley's sympathy toward her and his will to defend her throughout the investigation regardless of whether she is really guilty or innocent.

As the investigation goes on, Baley becomes more sympathetic and more attracted to Gladia, especially when he discovers the reason for her frequent quarrels with her husband. Indeed, in spite of all inhibitions and taboos inherent in the Solarian society, Gladia desires affection, likes children, and longs for human interaction, while her husband is a "good Solarian," cold and busy in his work, and, like all Solarian couples, they are assigned to each other through gene analysis, but they are not assigned children:

Baley said, "Dr. Delmarre was not a very affectionate man, was he?

She said in a strangled way, "He was a very busy man."

Baley said, "You are affectionate, on the other hand. You find a man interesting. Do you understand?"

"I can't help it. I know it's disgusting, but I can't help it. It's even disgusting t- to talk about it."

"You did talk about it to Dr. Leebig, though?"

"I had to do something and Jothan was handy and he didn't seem to mind and it made me feel better."

"Was this the reason you quarreled with your husband? Was it that he was cold and unaffectionate and you resented it?"

"Sometimes I hated him." She shrugged her shoulders helplessly. "He was just a good Solarian and we weren't scheduled for ch- for ch-" She broke down (218).

After this interview, Baley promises to help her, especially when she reveals that she does not remember anything of the day of her husband's murder because of her extreme anger and fury. She says,

> *I screamed at him but he never shouted back. He hardly ever even said anything and that just made it worse. I was so angry, so angry. I don't remember after that ... Only I don't* remember *anything else ... I've been so frightened, so frightened. Help me, please, Elijah (218-219).*

In contrast to the static Solarian characters, who accept their stagnant way of life, Gladia grows and accepts change by letting her instinctive desires develop freely with the help of Baley, who regards his experience with her as an experiment by making her, as he tries to make himself, behave in other ways than those to which she has been conditioned. As Earthman Baley is terrified of open spaces, Solarian Gladia finds it equally hard to be in the physical presence of another human being. Thus she initially hesitates when Baley asks to see her, but later she eagerly accepts, and her reaction toward Baley does not seem repulsive as that of other Solarians. When Gladia allows Baley to visit her, she is not bothered by his proximity and she invites him to walk in the garden where she allows him to get closer to her and even to sit on the same garden bench. At one moment when Baley moves much closer to her, he begs her pardon and says, "That's pretty close to you, isn't it?" She replies, "It's all right", and then "she spread out her little hands, palms up. 'I'm getting used to it. Really'" (215). So Gladia comes easily to overcome her Solarian neurosis because of her intuitive desire to break out of the mechanical life she has been leading for so long, and she succeeds to conquer her deeply ingrained taboo of human contact. Before Gladia leaves to Aurora and Baley to Earth, she asks him for a last meeting which turns into a touching emotional farewell scene that concludes the novel and in which Asimov reveals both their mutual attraction and the deep

intuitive bond that connects them. In fact, both Baley and Gladia are able to perceive the stagnation of their respective worlds, and both are able to change, and to violate the deeply rooted customs of their societies, and to be simply humans endowed with the human traits of free will and free choice.

In his decision of adding emotional content to his intellectually conceived science fiction world, Asimov achieves a balance between human ethic and technological progress that are both necessary for the survival of mankind. For that purpose, the farewell scene between Baley and Gladia, instead of one between Baley and Daneel as in the first novel, appears as one of the key scenes in *The Naked Sun*:

> *"But why have you decided to see, rather than view?"*
>
> *"Well"* –She smiled weakly- *"I've got to get used to it, don't I, Elijah?* I mean, *if I'm going to Aurora." ...*
>
> *"Good. You'll be happier, Gladia. I know you will."*
>
> *"I'm a little afraid."*
>
> *"I know ... But you'll get used to it and, what's more, you'll forget all the terror you've been through ... and you will be married someday,* too. Really *married, I mean."*
>
> *"Somehow," she said mournfully, "that doesn't seem so attractive to me – right now."*
>
> *"You'll change your mind." ...*
>
> *"May I touch you? I'll never see you again, Elijah."*
>
> *"If you want to."*
>
> *Step by step, she came closer, her eyes glowing, yet looking apprehensive, too. She stopped three feet away, then slowly, as though in a trance, she began to remove the glove on her right hand ... Her hand was bare. It trembled as she extended it. And so did Baley's as he took her hand in his. They remained so for one moment, her hand a shy thing, frightened as it rested in his. He opened his hand and hers escaped, darted suddenly and without warning toward his face until her fingertips rested featherlight upon his cheek for the barest moment.*
>
She said, "Thank you, Elijah. Good-bye."
>
He said, "Good-bye, Gladia," and watched her leave.

> *Even the thought that a ship was waiting to take him back to Earth did not wipe out the sense of loss he felt at that moment (256, 257, 258).*

Although Baley and Gladia recognise the gulf between their cultures, they recognise their mutual attraction, and the emotional content of their last meeting highlights the possibility of romance between them. This appears as a sort of motive for Baley's shielding of her as he righteously takes the attitude that she has been used by Leebig to kill Delmarre in the same way he has used the robots in the attempts on Gruer's and Baley's lives, and he therefore assumes she is not morally guilty. In fact, Baley admits that Gladia has actually killed her husband in a fit of anger, but it is Leebig who has arranged it. Baley explains to Minnim that

> *Morally, the responsibility wasn't hers. Leebig knew Gladia quarreled bitterly with her husband, and often. He must have known how furious she could grow in moments of anger ... So he supplied Delmarre with a robot and instructed it with all the skill he possessed to hand Gladia one of its detachable limbs at the moment of her full fury. With a weapon in her hand at the crucial moment, she acted in a temporary blackout ... Gladia was as much Leebig's unwitting instrument as the robot itself (263).*

Even during the climactic scene, when Baley unveils Leebig's plans and his responsibility for the murder, he reassures everyone that "It is easy to show that, whoever committed the murder, Mrs. Delmarre did not" (246). And after Leebig's suicide, Baley tells no one on Solaria of Gladia's part in the crime, and thus he can successfully protect her. Baley believes that there is little chance that anyone will think Leebig did not commit the murder because he "counted on the Solarians being too horrified at his misuse of robots to stop to think the murder required personal presence and Leebig would die rather than allow that" (263).

On the other hand, Baley's shielding of Gladia is not only motivated by their mutual attraction and their apparent romantic relationship, but it is much more dictated by his desire to allow her to lead a normal human life and to allow her

affectionate nature to be freely expressed for the sake of humanity's future. Baley arranges for her to immigrate to Aurora, and he tells Minnim that he has decided to have Gladia leave Solaria, not to save her in case Solarians begin thinking about the case again, but because "she had suffered enough. She had been victimised by everyone; by her husband, by Leebig, by the world of Solaria" (264). And when Minnim says, "Weren't you bending the law to suit a personal whim?" (264), Baley reveals his real intentions and his concern about the future of Earth and of mankind: "It was not a whim ... Earth's interests were paramount, and for the sake of those interests, I had to see that Leebig, the dangerous one, dealt with. As for Mrs. Delmarre, I made her the basis of an experiment" (264). He explains,

> *I wanted to know if she would consent to face a world where personal presence was permitted and expected. I was curious to know if she had the courage to face disruption of habits so deeply settled in her. I was afraid she might refuse to go; that she might insist on remaining on Solaria ... rather than bring herself to abandon her distorted Solarian way of life. But she chose change and I was glad she did (264).*

Obviously, Baley draws a parallel between his own experience as he succeeds in taking the first step toward a new life free from the enclosures of the caves of steel on Earth and Gladia's experience as she accepts to liberate herself from the unnatural way of life on Solaria. For Baley, Gladia's act "seemed symbolic. It seemed to open the gates of salvation for *us* ... for all mankind" (265). Earth would survive its caves of steel by resuming its march to the stars, and humanity would make better use of technology in order to keep the balance between human nature and values and the rationality of science and technology, in the same way as Asimov designed his story without upsetting the balance between emotion and intellect.

From the analysis of the principal characters in *The Naked Sun,* it clearly appears that characterisation is made subordinate to Asimov's vision of the future of

humanity through the fictional setting and landscape that might result from overdependence on technology. The key concept that governs the novel, as any other science fiction novel, is change and its effects; it is change in the environment and the conditions of life of man, and therefore a change in the relation of character to that environment. In contrast to the views that science fiction is a genre devoid of convincing characterisation and that science fiction writers have no space for deep character development, Asimov provides in his robot novels good examples of character development with different thought and behavioural patterns and different responses to the changes in social life which all help in shaping individual characters and in expressing their active participation in the development of plot and interpretation of theme. Elijah Baley is a well-developed character in both robot novels, though he commands more of Asimov's attention in *The Naked Sun* in which he explores more deeply the interior Baley, probing his phobias, his desires and his internal strengths. Asked in an interview which character in his novels is most closely associated with the type of person he is, Asimov answers in the following words: "I suppose it would be Elijah Baley in *The Caves of Steel* and *The Naked Sun* ... He is a person with virtues I wish I had and faults I know I have" (Quoted by Ingersoll 1987: 73). In addition, the representation of the female character Gladia Delmarre in *The Naked Sun* sets very early the background for a new image of women in post-war American science fiction that began to be marked by an engaged awareness of the contemporary issues around sex and gender roles. Traditionally, science fiction had been considered a predominantly masculine field which, through its focus on rational subject matters, excludes women and all the emotional forces in human life as symbolic of the feminine. In fact, women were not entirely absent in the early science fiction, but their representation involved a denial of difference

between man and woman by portraying them as reflections of the masculine rather than as fully female characters. Asimov himself has this image of women in *I, Robot* stories in which the female scientist Susan Calvin, with her cold nature, her adherence to rationality, and the repression of her emotional life, masquerades as a female man; indeed, her performance of masculine gender attributes ultimately compromises her natural identity as a woman. Then Asimov presents in *The Naked Sun* a totally different woman character who is able to express fully her natural identity and to understand her deep emotional needs, and who eventually decides to change her way of life, not only for her personal well-being, but for the future good of all humanity.

Accordingly, Asimov's major characters can by no means considered thin or weak characters; they are rather characters who embody new dimensions larger than those inherent in the mainstream novel. While the traditional novel, and more particularly the modernist novel, is animated by an interest in the intricacies and the close scrutiny of character as the central focus of the writer, the science fiction novel since 1945 is more sustained by the typological and generalising interest that makes individual characters representative figures with broader implications concerning humanity at large. John Campbell was among the first science fiction writers and editors of the Golden Age to note the difference between conventional standards in mainstream literature and science fiction in dealing with characterisation; he insists,

> *Science fiction does not fit into the mainstream of literature, and, so long as it is science fiction, won't. The fundamental difference is this: the mainstream serious novel tries to show the effect of experiences on the individual who is the central character. Science fiction tries to explore the effect of experiences on the group-entity –culture, race, or corporation of races- which is in fact the central character. Note that this must be presented through individual eyes (Quoted by Brainbridge 1986: 13).*

It is actually the fictional world of the future with all the changes brought in by science and technology and the response of humans to these changes that dominate the science fiction narratives. Mark Rose puts it in clear terms as he claims that

> *The most active element in the story is frequently neither character nor plot but landscape ... Characters are not characters at all in the novelistic sense, but merely such representative figures. The protagonist can be mankind as a collective entity, the antagonist might be described as the physical circumstances of the cosmos in which mankind attempts to survive ... The narrative's emphasis may fall upon the threat of change, the process of change, or the effects of change (Rose 1981: 26, 28).*

Therefore, the depiction of characters in the science fiction worlds can be stated as a true reflection of the status of the individual human in contemporary society which has grown more rationalised and the experience of living within it has grown more alienated. The overwhelming social change accelerated by the rapid growth and progress in science and technology, as depicted in Asimov's novels, have led to the loss of human identity and to the self's impotence and dissolution in the face of the collective forces in society. All Earthmen in Asimov's robot novels, of whom Baley is representative, are caught in the City's trap in which they attempt to survive and to affirm their human identity in the face of the overwhelming dominance of technology. Similarly, humans on Solaria lose their human identity and become machine-like creatures like their robots, and it is only Gladia Delmarre who struggles hard to regain her freedom and affirm her human nature against the established order represented by the mechanised society and its culture. Scott Sanders explains how the collective pressures of contemporary society have the greatest impact on the depiction of characters in science fiction:

> *In proportion as the complexity of social organization increases, the power of the individual to comprehend or affect the world dwindles. The reigning institutions of modern society –technological production, bureaucracy, cities, mass-media- so regiment and fragment the social world that the individual is thrown back upon his island of subjectivity in search of meaning and*

> *coherence ... Writers of science fiction have projected images of the self as puppet, robot, automaton. The characters in much science fiction are manipulated characters; they are citizens of an administered world (Sanders 1979: 135-136).*

In Asimov's fictional worlds, the effects of change come from the robots –the product of advanced technology- that represent a threat to human identity. Though robots are devoid of feeling and free will, and they are mere conveniences for the carrying out of functions for which they are designed, they eventually menace humanity with extinction unless they are used wisely for the comfort and well-being of mankind. In Asimov's robot novels, robots expose again those old fears of a highly technological and industrialised society in which machines confront human beings with threatening images of transformed humanity. Indeed, human characters appear as having less and less control over their destiny, they act as a collective entity, lacking the traits of individualised personality, and yet Asimov makes of Baley and Gladia two of the strongest and most memorable characters in science fiction of the post-war decades with their positive development and their actions in confronting the negative changes in their respective societies. In spite of the strong development of Baley's and Gladia's characters, they are still representative figures of humanity and its concern about survival, and even their struggle is not for personal purposes, but rather for the salvation of their own race. In his interview with Earl Ingersoll, Asimov summarises his strategy in writing his robot stories by stating,

> *Over the past two centuries, we have watched our society grow more and more machine-made ... and I assume that in one of our possible futures, machines will continue to play more and more of a part in our society –in fact, to the point where machines may eventually "take over." So, a good portion of my stories deal with this possibility; I have machines beginning to have human intelligence and capable of doing all sorts of complex tasks we associate only with human beings; and eventually I write stories in which the machinery does, more or less, threaten to take over ... Generally in science fiction stories the change is for the worse, or threatens to be for the worse ... Science fiction teaches that there are numerous changes and that mankind by its actions can*

pick and choose among them. We should choose one which is for the better. That is the proper interpretation of the role of science fiction (Ingersoll 1987: 68, 76).

Conclusion

As a writer of social science fiction, Isaac Asimov is mostly distinguished for bridging the cultural gap between physical sciences and the humanities, and throughout his work, especially in his robot novels, he has attempted to examine the human condition in radically changed environments in light of radically new scientific and technological facts. To this end, Asimov's major concern is the construction of a world different from that of the present, a world which may be another planet or a future society in which conditions have changed in a dramatic way, and the exploration of the effects of this change on the life and psychology of human characters as a collective entity. In Asimov's created worlds, characters are not props or stock figures, they are rather active with a science fictional dimension; that is to say, they allow the writer to foreground the society and to explore its effects on them. Besides, Asimov's legacy as the leading figure of post-war American science fiction has been enhanced by establishing the basic principles and techniques that have become the distinctive features of modern science fiction.

CHAPTER FOUR

Characters of Ideas in Robert Heinlein's Novels of the 1950's and 1960's

Introduction

4.1. Robert A. Heinlein: The Dean of Science Fiction Writers

4.2. ***Starship Troopers***: The Military Saga of American Science Fiction

4.2.1. Summary

4.2.2. The Education of a Soldier

4.2.3. The Military: The Power that Blots Out Character

4.3. ***Stanger in a Strange Land***: A Novel of Cultural Revolution

4.3.1. Summary

4.3.2. Valentine Michael Smith and Jubal Harshaw: The Teachers of a Generation

4.3.3. ***Stranger in a Strange Land***: The Subversive Cult Book of the 1960's

Conclusion

CHAPTER FOUR

Characters of Ideas in Robert Heinlein's Novels of the 1950's and 1960's

Introduction

Robert Anson Heinlein is usually identified, along with Isaac Asimov and Arthur C. Clarke, as one of the three masters of science fiction to arise in the Golden Age period, associated with John Campbell and his magazine Astounding. Often called the dean of science fiction writers, Heinlein established his reputation as one of the most influential and controversial authors of the genre, and he succeeded to prove his own distinctive voice by introducing realistic detail and context into his stories, and by setting a high standard for both science and engineering plausibility and literary quality. Robert Heinlein was the first writer to bring science fiction out of the low-paying pulp magazines and into the prestigious magazines of mainstream literature. Most of his works have been continuously in print and in many languages, and some have become classics that expose Heinlein's philosophies and ideas about the politics, religion, and morals of his own time and that have constantly made him a target for outraged critics for the daring and direct way in which he expressed his ideas. In this chapter, two of the most influential works of Heinlein are brought to study to examine the presentation of his characters and their role in the building up of his narratives.

4.1. Robert A. Heinlein: The Dean of Science Fiction Writers

Robert Anson Heinlein was born on 7 July 1907 in Butler, Missouri, to Rex Ivar and Bam Lyle Heinlein, a family of German, Irish, and French extraction resident in America since before the American Revolution. A few months after Robert was

born, his family moved from Butler to Kansas City where he was educated in the City's public school. Largely excited by the apparition of Halley's Comet in 1910 and the media coverage that followed the event, Heinlein's major and consuming interest turned to astronomy, and by the time he entered Kansas City's Central High School in 1920, he had already read every book on astronomy in the Kansas City public library and he also read all the science fiction he could lay hands on, especially the cosmic romances of Olaf Stapledon, Edgar Rice Burroughs, Jules Verne, and H. G. Wells. Heinlein's childhood spent in Kansas had a great influence on his life and later on his fiction as the area was part of what is called "The Bible Belt" where the values of socially conservative evangelical Protestantism dominated the cultural and political atmosphere and which Heinlein would later break with both in his personal life and in his writing.

After finishing high school in 1924 and studying a year at the University of Missouri, Heinlein entered the U.S. Naval Academy at Annapolis in 1925, majoring in naval science. In 1929 he graduated twentieth in a class of 243, and he subsequently served on active duty in the Navy as line officer on the new aircraft carrier USS Lexington. In 1932 Heinlein was assigned to the destroyer USS Roper, reaching the rank of lieutenant, while his brother Lawrence Heinlein served in the Air Force and rose to the rank of Major General. Late in 1933, Heinlein contracted pulmonary tuberculosis, and in 1934 he was discharged from the Navy as permanently disabled and medically unfit for service. Heinlein's career in the Navy had a great influence on his life and on his writing as he strongly believed in the ideals associated with the military such as loyalty, patriotism, and sacrifice. After his discharge, Heinlein entered the University of California at Los Angeles (UCLA), and

he attended graduate classes in mathematics and physics, but he did not complete because of further health problems.

After trying several occupations, including real estate sales and silver mining, he took up politics at a time when he was already active in Upton Sinclair's socialist End Poverty in California movement (EPIC) in the early 1930's. Heinlein campaigned for Upton Sinclair when he gained the Democratic nomination for Governor of California in 1934, but Sinclair lost the elections because the State of California was dominated by Republicans. Pursuing his second career in politics, Heinlein ran in 1938 for the California State Assembly seat (Hollywood) as an EPIC-endorsed candidate. Heinlein's campaign failed after he had been vilified as a "red" – the standard term of abuse used for liberals- by the conservative press led by a chain of newspapers owned by William Randolph Hearst. In this ideological war, Heinlein felt he did not fit the pattern, and during his campaign he clearly outlined the similarity between European Fascism (Germany and Italy) and Soviet Communism as being both totalitarian twins (Stover 2001: 124). In his political stance, Heinlein had always been a liberal in the classical sense that signifies freedom from government as compared to today's meaning that favours big government and welfare statism. Besides, Heinlein remained consistently anti-communist and his political positions and views of his country and of the world appeared in many of his works and made him one of the most controversial science fiction writers of the post-war era.

After his failed campaign in politics and with a mortgage to pay off –he had only a small disability pension from the Navy- Heinlein, who was an avid reader of science fiction, turned to writing that would become his third and final career.

Heinlein sold his first story "Life-Line" to Astounding Science Fiction in 1939, and he soon became one of John Campbell's protégés who would profoundly shape the magazine's and the genre's Golden Age. The next three years saw Heinlein's instant ascendancy at Astounding Science Fiction and his rapid success with the readers of the genre. Having entered the field as a mature man, already in his thirties, with a military career honourably behind him, he was writing prolifically under his own name and several pseudonyms, and he became in a short time a major figure in the field, moving from complete obscurity to a position of unrivalled dominance in science fiction. During this first period of his writing career, Heinlein produced almost thirty short stories and four novels, most of which formed the nucleus to his Future History sequence which was imitated by many other science fiction writers such as Poul Anderson and Larry Niven. For many years, only Heinlein's and Asimov's schemes of Future History were able to generate a sense of conceptual breakthrough in the science fiction genre with a timeline of significant political, cultural, and technological changes. Heinlein's early stories include "Requiem" (1940), "The Roads Must Roll" (1940), "Blowups Happen" (1940), and "If This Goes On" (1940), which all fit into the Future History outline. Two early novels also belong to the sequence: *Orphans of the Sky* (1941), which is the story of a big starship that sets out to colonise an Earth-like planet and that contains for the first time in the history of science fiction an innovative presentation of the generation starship in which its human supercargo must continue to breed and preserve a scientific culture until the destination is reached. The city-sized ship The Vanguard must maintain a complete civilisation and is intended to seed mankind among the stars, but over the generations the expedition fails and the culture descends into medieval barbarism. Another generation ship, The New Frontiers, follows in

Methuselah's Children (1941), which concerns an extended family, the Howard family, whose members are able to achieve long life-spans through selective breeding, and in which the heroic leader Lazarus Long pioneers the Galactic worlds, and he is to reappear in many other novels of Heinlein up to his last one in 1987.

In addition to the Future History stories which were collected in the 1966 omnibus volume *The Past Through Tomorrow*, Heinlein published *Sixth Column* (1941) about an Asiatic invasion of the USA which is defeated by a resistance using super scientific gadgets, and *Beyond this Horizon* (1942) which describes a future society in which genetic engineering plays a major role in the genetic selection for longevity, good health, and intelligence with the result that people start to question the meaning of life. Some of Heinlein's other best stories of this period include "And He Built a Crooked House" (1941), "By His Bootstraps" (1941), "They" (1941), and "Waldo" (1942) which were collected with other stories in various volumes, including *Waldo and Magic, Inc.* (1950), *Assignment in Eternity* (1953), and *The Menace from Earth* (1959).

Heinlein published no fiction during the Second World War. After the Japanese attacked Pearl Harbour and the United States entered the war, Heinlein immediately applied for active duty and he worked as a civilian aviation engineer at the Naval Air Experimental Station in Philadelphia along with Isaac Asimov and Sprague de Camp. After the war, he returned to California and resumed writing, not only for the science fiction magazines, but he tried to conquer other literary venues. Taking advantage of the growing interest in science fiction, engendered by the ramifications of the atomic bomb and the scientific developments of the war period, Heinlein pioneered new markets and he was the first science fiction writer to break out of the

"pulp ghetto" and to publish his stories in general and mainstream literary magazines, such as the American Legion Magazine, Blue Book, Short Stories, and Town and Country. He sold a number of stories, including "The Green Hills of Earth" (1947) which belongs to the Future History sequence, to the Saturday Evening Post magazine, and he approached the prestigious Charles Scribner's Sons publishing company to publish his new juvenile science fiction novels which he started immediately after the war. *Rocket Ship Galileo* (1947) was the first juvenile novel published by Scribner's in a series that represents the most important contribution a science fiction writer has made to adolescents' science fiction. The Heinlein juveniles are tales of adventure that feature a mixture of adolescent and adult themes, sometimes involving sophisticated and complex themes, as Heinlein believed that juvenile readers are far more intelligent and able to make their way in the adult society and to handle the problems they face and experience. Some representative titles of this type are *Space Cadet* (1948), *Red Planet: A Colonial Boy on Mars* (1949), *Farmer in the Sky* (1950), *Starman Jones* (1953), *Have Space Suit – Will Travel* (1958), and *Podkayne of Mars* (1963). Heinlein continued to write juveniles throughout the 1950's and the early 1960's at the rate of one book per year, and these allowed him to become the most outstanding writer of science fiction for teenagers. In parallel, Heinlein embarked on film and TV writing, and he was credited with the invention of one of TV's earliest science fiction heroes of the 1950's, Tom Corbett: Space Cadet, that was developed by Joseph Lawrence Greene, inspired by Heinlein's novel *Space Cadet* (1948). Heinlein was also one of the three writers involved in the writing of the script of *Destination Moon* (1950), which started a new trend in cinematic science fiction, the finance and manufacture of the first spacecraft to reach the moon.

In 1947 Heinlein divorced his wife Eleanor Curry (married in 1929), and the following year he married Virginia Gerstenfeld, an engineer and chemist with whom he had worked in Philadelphia during the war. With her intellect and strength of character, Virginia "Ginny" soon became an integral part of Heinlein's professional life and she sustained his career through all the successes he achieved. The couple moved to Colorado in an area around Denver, and since that time Heinlein devoted his life to writing and travelling. In 1952 they began their travel with a tour of the National Parks, and in 1953 they took a six-month-voyage around the world which provided useful material for his novels that involve long voyages aboard spaceships, especially in his juvenile fiction. The 1950's were a vintage period for Heinlein; in addition to his successes in the profitable juvenile market, he published several adult novels, among which *The Puppet Masters* (1951) stands out as the most important and it won Heinlein his first Hugo Award in the same year. *The Puppet Masters* is a hysterical invasion story and an allegory-for-communism text in which the invading Martian "Slugs" attack the human backs to guide their hosts' nervous system and to infiltrate the highest levels of the US government and military. Other works of the decade include *Double Star* (1956), about a brilliant actor who impersonates a galactic politician with whose views he deeply disagrees, and *The Door into Summer* (1957), a time-travel story which combines hard science fiction and fantastic elements.

In the late 1950's and the early 1960's, when science fiction itself was on the verge of a transition with a new generation of writers and with all the factors that would result in the cultural revolution of the 1960's, Heinlein achieved more popularity and success by bringing his own vision of modern science fiction to a wider audience when a greater proportion of society became initiated into the science

fiction subculture. In 1959 Heinlein produced one of his most controversial novels of the period, ***Starship Troopers***, in which he expressed his political opinions with unfettered vigour that shocked the science fiction community. ***Starship Troopers*** is a tale of interstellar war, and it is about a young man who volunteers for the Terran Federation's Mobile Infantry and who finds purpose in submitting to the military discipline. The novel, which was intended by Heinlein to juvenile readers, was published by Putnam's as an adult novel after having been rejected by Scribner's on the grounds that the work was too militaristic for tender juvenile minds; it nonetheless won a Hugo Award at the 1960 World Science Fiction Convention, Heinlein's second. Heinlein's next novel, ***Stranger in a Strange Land*** (1961) which won him another Hugo Award, was even more radical. It is a complex satire of sex and religion that relates the story of a human raised on Mars and who returns to Earth and begins his transformation into a Messiah-figure. The book achieved tremendous success (It was the first science fiction novel to score on the best-seller list of The New York Times) and proved to be Heinlein's most popular novel of the 1960's, becoming a cult book among college and university students for its advocacy of sexual liberation and mysticism, and therefore it did resonate with what would become the counter-culture movement of the 1960's.

After these two major successes, Heinlein wrote ***Glory Road*** (1963), a heroic fantasy involving swordplay and magic in the Tolkienian tradition of ***The Lord of the Rings*** (1954-1955) which had a great influence on modern fantasy, and ***Farnham's Freehold*** (1964), in which, following a nuclear attack, the hero's bomb shelter is flung by the tremendous power of the blast into a future world where the rule of America has passed to Blacks who have developed a civilisation based on enslaving whites. By 1965 the Heinleins moved to Santa Cruz, California, where they designed

a unique circular and highly-engineered house, customised to their own lifestyle and including a nuclear shelter, and which Heinlein built himself in the Boony Doon area. The first work to appear after his settlement in California was *The Moon is a Harsh Mistress* (1966), a novel of revolution in which a Lunar-born computer technician is involved with the help of a master computer in a revolutionary movement of the moon colonists against Earth for a free Lunar republic. The novel won a Hugo Award the following year, the last Hugo Heinlein received for his novels.

Following his interest in drawing public attention to the new frontiers of outer space and his support for America's growing aerospace industry, Heinlein was invited by Walter Cronkite to speak as guest commentator on CBS-TV during the Apollo 11 mission which landed two astronauts on the moon on July 20, 1969, along with Arthur C. Clarke, Isaac Asimov, and Ray Bradbury. Heinlein was indeed influential in making space exploration seem a practical possibility almost a decade before such an idea became commonplace, and in recognition of his efforts in the field, Main-belt asteroid 6371 Heinlein, discovered in 1985, was named in his honour. In 1970 Heinlein finished his next novel *I Will Fear no Evil* about a rich old man who has his mind transferred to the body of his young secretary as his body fails him. The novel brings into the open the espousal of free sex as the old man's brain learns from the residual mind of his new female body more about sex than he ever thought possible to know or feel. Beginning in 1970, Heinlein suffered a series of health crises, and the first was an attack of peritonitis from which he recovered more than two years later. It was not until 1972 that he was back to strength for writing, and he published *Time Enough for Love* in 1973, the last in the Future History series set in the universe of over two thousand years in the future, wherein mankind has

spread to the stars led by the long-lived major figure Lazarus Long of *Methuselah's Children.* In 1975 Heinlein received the first Grand Master Nebula Award for his life achievements, and then he wrote no fiction until 1980.

In the late 1970's, Heinlein and his wife helped organise blood drives in the United States, and having a rare blood type himself (AB+), Heinlein was a frequent donor and a supporter of the National Rare Blood Club. During his appearance as Guest of Honour at the 34th World Science Fiction Convention in Kansas City, Heinlein helped organise the first of many Science Fiction Convention blood drives, followed by another at the San Diego Comic Book Convention in 1977. However, during a vacation to the South Pacific early in 1978, Heinlein had a transient Ischemic Attack, a brief blockage of blood to his brain that can be a precursor to a cerebral stroke. It was revealed that the problem was a blocked carotid artery and thus he had a carotid bypass operation to restore oxygen flow to his brain. After his surgical treatment, Heinlein was requested to give testimony before a joint session of the House Committee on Aging and the House Committee on Science and Technology on the subject of applications of space technology for the elderly and the handicapped, drawing extensively on his high-tech carotid bypass operation. During the last years of his life, Heinlein wrote five novels which convey his philosophies and beliefs concerning politics, sex, and religion initiated with ***Starship Troopers*** and ***Stranger in a Strange Land***. His first was ***The Number of the Beast*** (1980), a science-fantasy novel describing a time-machine travel through parallel universes; followed by ***Friday*** (1982), about an artificial genetically engineered female person who is mentally and physically superior to ordinary humans, but who struggles against prejudice because of her non-human status; ***Job: A Comedy of Justice*** (1984), a satire of organised religion; ***The Cat Who Walks Through Walls*** (1985), an adventure story

about an ex-soldier and freelance writer who is asked by his new wife to rescue a sentient computer on Luna; and *To Sail Beyond the Sunset* (1987), a story involving time travel, free love, and voluntary incest; it is a memoir of Maureen Johnson Smith Long whose family belongs to the Howard Families of *Methuselah's Children* and who recounts her long series of sexual adventures. Along with his writing career, Heinlein was also an active promoter of the space programme in the early 1980's and he participated in a Citizens Advisory Council on National Space Policy, which met in December 1984 at the home of science fiction writer Larry Niven in Tarzana, California, to discuss the Strategic Defence Initiative (known as Star Wars) created by U.S. President Ronald Reagan. By 1987 Heinlein's health had been worsening, and on May 8, 1988, he died peacefully in his morning nap from heart failure. His body was cremated and his ashes strewn in the Pacific from the deck of a warship.

Throughout his life and even after his death, Heinlein's work has reached much larger audience than most science fiction of the post-war era, and it has been the subject of complex political, moral, and religious polemics which are generally of a conservative nature. While some writers like Isaac Asimov and Kurt Vonnegut leaned to the left, Robert Heinlein leaned heavily to the right, and he was known for his anti-communist position which appeared in many of his stories such as ***Starship Troopers*** and ***The Puppet Masters***. In 1958, outraged by a newspaper advertisement sponsored by the National Committee for a Sane Nuclear Policy, urging the United States to suspend nuclear testing unilaterally, Heinlein responded with a full-page counter-advertisement, preserved in his 1980 collection of stories and essays ***Expanded Universe*** as "Who Are the Heirs of Patrick Henry", in which he considered the act a gross error in the Cold War's international brinksmanship. Along with his conservative stand, Heinlein achieved his maximum popularity in the

1960's with his novel *Stranger in a Strange Land*, regarded as a sort of fictional manifesto of the 1960's counterculture, largely leftist in its orientation. Heinlein's advocacy of individual freedom of thought and action –he was pro-drugs and free love and he opposed organised religion and any encroachment of religion into government- made his right-wing attitudes more libertarian and anarchist than conservative. In reality, Heinlein seemed to hold to no stable political position and he appeared to swing across the political spectrum, each time having a specific stand for a specific issue, whether political, social, or cultural. In this chapter, the study deals with the characters that fill the foreground of Heinlein's narratives and who hold a particularly Heinleinian mark of strength and competence rarely found in post-war American science fiction. The study is centred on two of his most successful novels of the 1950's and 1960's: *Starship Troopers* and *Stranger in a Strange Land*, which brought him unprecedented fame and popularity among both the science fiction and mainstream literature communities.

4.2. *Starship Troopers*: The Military Saga of American Science Fiction

At the same time that Heinlein won wider recognition outside the low-rating pulp magazines, critics discovered his controversial book *Starship Troopers* which weathered a storm of polemic especially after it won the Hugo Award as 1959's best science fiction novel. The work was first serialised in the Magazine of Fantasy and Science Fiction in October and November 1959 as *Starship Soldier*, and the book was released by Putnam's Sons in December 1959.

4.2.1. Summary

The book presents a future world in which man has achieved interstellar travel and has made contact with other intelligent alien species. In this world, a period of

high crime and insecurity has preceded the collapse of existing social systems and led to the establishment of the Terran Federation of Earth, a new world government ruled by a military elite. The Terran Federation is a liberal representative democracy, and under this new system all residents are protected by the state's constitution and they enjoy the same legal rights and privileges with the exception that citizenship is open to all, regardless of race, creed, religion, or gender, but it is not a birth right. Only veterans of the military enjoy full citizenship, including the right to vote, and have access to civil service positions. Upon reaching the age of eighteen, a resident may volunteer for appropriate qualifying military service in the Federation's armed forces for a term of two years, which can be indefinitely extended by the state in the case of war, and after which the volunteer is discharged and granted suffrage.

The protagonist and narrator of the story is Juan "Johnnie" Rico, a boy who volunteers for the Terran Federation's Mobile Infantry (M.I.), a futuristic military unit akin to the U.S. Marine Corps, but with more mobility and more fire power. The story centres on the military education and training of Juan Rico who finds purpose in submitting to military discipline and in serving the patriotic cause for which the Mobile Infantry was created. Patriotism in the novel relates to the species patriotism of the whole human community that urges the Mobile Infantry to defend the Terran frontiers of human freedom against the aggression of the implacable enemies, the Bugs that are an arachnoid alien species of a collectivist nature both in biology and political organisation. The novel opens with a detailed first-person account of a military action against an extra-terrestrial race, dubbed the "Skinners", that are allies of the Bugs and that the Federation tries to force into changing sides by a show of force. Juan Rico is involved as an assistant section leader, and the assault begins by dropping the infantry by the spaceship Rodger Young onto the surface of the planet

and then the battle is launched by means of sophisticated communications equipment built into the troopers' powered suits and an arsenal of weapons, including small nuclear bombs. After destroying their targets, the troops retreat with a single casualty, Dizzy Flores, who dies on the way up to the Rodger Young.

Then the bulk of the story is given over to a flash back on Johnnie's military education and training in the Mobile Infantry, during which he recalls the teachings of his high school instructor in History and Moral Philosophy and an M.I. veteran, Lt. Col. Jean V. Dubois, which sustain him during the hardships of his infantryman's training. Upon his graduation from high school and reaching the age of eighteen, Johnnie decides to enlist in the Federation's army in spite of the objections of his wealthy father who wishes his son would go study business at Harvard instead of wasting two years of his life in the army because he believes the planet is peaceful and the military is for inferior unemployed people who would live at public expense for a term of years. Johnnie decidedly goes with his friend Carl to the recruiting office where a Fleet Sergeant tries to discourage the boys, explaining that real military service is rough and dangerous even in peacetime and that not all volunteers can be real military men. Johnnie and his friend are determined to join up; they pass a series of physical examinations to decide what duties they are able to perform and then to take the oath. After four more days of aptitude tests, Johnnie gets his orders for Mobile Infantry and he joins other recruits who are shipped out to boot camp at Camp Arthur Currie for basic training.

Johnnie's military training is described as physically rigorous and demanding, and under the command of Career Ship's Sergeant Charles Zim, Johnnie goes through the hardest exercises, parade drills, and route march, and those who fail or

violate the Laws and Regulations of the Military Forces are apt to suffer severe punishment, including floggings in front of the other troops. At one moment, Johnnie considers to resign when one of the recruits, Ted Hendrick, is brought before court-martial by battalion commander Captain Frankel for disobedience of orders and striking a superior officer, and he is sentenced to ten lashes and then dismissed. Johnnie later gives up the idea of leaving the camp after he receives a letter from his high school instructor Mr. Dubois, telling he is proud of him because he has joined the Mobile Infantry. In the first six weeks of training, the company has shrunk to platoon size; two boys die, some are discharged because of bad conduct or unsatisfactory performance, some have medical discharges, and many others cannot stand the pace physically and they have resigned. During these first weeks, training gets cruelly hard and it includes combat exercises and manoeuvres using everything from bare hands to simulated nuclear weapons. The recruits train with knives, stick, wire, and also modern weapons with a lot of simulation. They are also taught by Sergeant Zim that there are no dangerous weapons, but there are only dangerous men who can fight even without a weapon as long as they are still alive. Sergeant Zim gives the boys more lessons about violence in the war which he defines as a controlled and purposeful violence decided by the state and the generals while the soldiers' job is to supply the violence. Throughout his basic training at Camp Currie, Johnnie recalls the teachings of his high school instructor Mr. Dubois which serve him as a guideline in his instruction in the army, and which sustain him in overcoming the hardships and rigorousness of military training. In one of the simulated battles, Johnnie fails to handle simulated nuclear weapons and he is flogged, while a fellow boy named Dillinger deserts the camp and murders a baby girl in the town. The boy is brought back to the camp and hanged by his battalion.

After the first stage of training in flat country, the recruits move to another camp, Camp Sergeant Spooky Smith, in the Canadian Rockies, to do more training in the mountains. At Camp Sergeant Spooky, the recruits have liberty to go to town every Sunday, the instructors are less severe, and there is less punishment, but exercises get tougher with drops practiced by entering capsules in spaceships and then dropping over mountains, into the arctic ice, into the Australian desert, and finally onto the moon. Although a lot of recruits get the panic and refuse to enter the capsule, Johnnie never refuses and he succeeds in making all kinds of drops, and thus he deserves the name of a cap trooper. Eventually, Johnnie graduates as a trained soldier in the Mobile Infantry, and he soon finds himself taking part in real combat operations after he learns that the Federation has moved from peace on into war against the Bugs. Johnnie reports to his first outfit named Willie's Wildcats, sometimes known as Company K, Third Regiment, First M.I. Division, and he ships in the Valley Forge, the company's spaceship, commanded by Dutch Bamburger. The war starts with the Bugs attack on the city of Buenos Aires in which Johnnie's mother, who has been in a visit to the town, is killed, and Johnnie does not learn about his mother's death until many months later. After Buenos Aires has been annihilated, the Federation immediately begins to plan its attack on Klendathu, the Bugs' home planet. However, the First Battle of Klendathu, codenamed Operation Bughouse, is unsuccessful; Johnnie's unit is decimated and casualties are high, including the platoon leader and sergeant. After eighteen hours on the Bugs' planet, the troops are called to abandon the assault, and in their retreat, the Valley Forge and Y pres collide and both ships are destroyed. Johnnie is among the few troopers who are lucky to get out of the ship's tubes in their fired capsules while the majority are killed in the collision, including the ship's captain.

Following the operation's disastrous failure, it is decided that it is impossible to reactivate Company K (Wildcats) with the few survivors who are then distributed to fill in other outfits around the fleet. Johnnie reports, along with Al Jenkins, for duty to the Rodger Young under the command of Sergeant Jelal, and becomes one of the Rasczack's Roughnecks, the company's troopers named after Lieutenant Rasczack. This part of the story concentrates on the daily routine of military life, the relationship between officers and non-commissioned officers, and the way the Rodger Young is run, including guard duty, electronic equipment supervision, and even cleaning and cooking. In the meantime, while the military takes time to heal up and to train more men, the Federation's ships, including the Rodger Young, make hit-and-run raids with actual drops in order to keep the enemy off balance. The battle scene against the Skinnies described at the beginning of the novel belongs chronologically to this stage in the war against alien enemies, and it is the battle during which Sergeant Jelal drops for the first time as platoon leader. This part ends with the death of Lieutenant Rasczack during one of the raids, and it is Sergeant Jelal who takes his place as the platoon leader.

After the raid on the Skinnies, Jelal is commissioned a lieutenant and the troopers on the Rodger Young take several other drops under his leadership while building up their forces and pursuing their shipboard life. Meanwhile, a fellow trooper named Ace suggests to Johnnie to pass the selection exams for Officer Candidates School to become an officer. When Johnnie goes to the school's commandant to have his orders stamped, he meets his father waiting to report on the Rodger Young with the Roughnecks. Johnnie learns that his father, Emilio Rico, has joined up shortly after his wife's death in the Buenos Aires attack, and he is surprised that his father is now proud of him as he would join Officers School. Johnnie finds

Officer Candidates School like Basic, but with a lot of books added. In the mornings, the candidates do the same things as in Basic and in combat they are chewed out for any failure; in the afternoons, they are cadets lectured an endless list of subjects, including math, science, galactography, logistics, strategy and tactics, military law, and psychology of leadership. Johnnie is surprised to find the course of History and Moral Philosophy in the O.C.S curriculum; it is devised in connection with the context of war to give a purpose to fighting. The course is lectured by Major Reid who insists that what is taught in the course is science through which he preaches force and authority equated with social responsibility and moral values. Besides, he accounts for the sovereign power of franchise held by the veterans as the system that works better than any used in the past. Toward the end, still under instruction, the cadets are commissioned temporary Third Lieutenant, and before they are shipped for a field-test final exam, the commandant gives them instructions, specifying the required qualities of leadership in war and the characteristics that make competent officers responsible for the lives of the men under their command and for the security of the state. Johnnie is finally assigned to the Tours, a mixed ship that carries fifteen naval officers and eight Mobile Infantry cadet officers.

During the first two weeks, Johnnie is kept so busy with routine work on board the Tours; he works as an ordnance and armour mechanic and he assures guard mount, parade inspection, and most important preparing the troopers for combat. As a preparation for the biggest raid on Klendathu, the Federation decides to seize Planet P, thought to be an advance base used by the Bugs against Terra, and sends its Mobile Infantry and Navy to clear the planet and plan the decisive battle that would end the war with the Bugs. In order to win the war, the Federation's Army needs to learn more about the Bugs psychology and motivations, and for this purpose, the

Battle Plan orders the troopers to capture Bug "Royalty," brains and queens, at any cost. The Bugs are described as insectoid creatures stratified into castes which include the queen of the colony or its progenitor, the brain Bug and it is the leader of the colony whose symbolic relationship with the Bugs leads to the death of the whole colony if it dies, the warriors that serve as the combat forces, and the workers that do all the work for the colony such as digging and upkeeping the tunnels and they possess a non-aggressive mentality. The Bugs have highly advanced technology and they possess spacecrafts and beam weapons, but they live in underground corridors and holes which are difficult for raiders to reach. The Federation forces have often cleaned out colonies from the surface in their encounter with the Bugs, but the troopers who pursued them into their tunnels have never come back and they are still thought of as prisoners. Being always unsuccessful while trying to go down their holes, the Federation decides to conduct Operation Royalty or Bug Hunt with massive force and new techniques to dig the Bugs out and defeat them above ground.

On Planet P, the Federation forces, including Johnnie's platoon, launch the operation by using snoopers and placing ground-listeners to check the holes of Bugs in various areas. While making the rounds and inspecting the listening posts, Johnnie receives the orders of Captain Blackstone to avoid contact with the Bugs, and if they break out, the troopers should launch a hunt of queens and brains. When the noise is located in one of the inspected areas, the Bugs suddenly appear, and Johnnie is engulfed in a swarm of Bugs as the ground falls away under him. Fortunately, he realises that they are harmless and non-aggressive workers and he succeeds in his powered suit to jump high and get outside that mass of loathsome creatures. In spite of being under orders not to attack underground, Johnnie's platoon sergeant goes down a Bug hole followed by his section, and they are all lost in the tunnels. Thus

Johnnie takes the decision to go down himself with three squads to rescue his men; they destroy the Bugs they meet and they lose four cap troopers in the fight. Then the sergeant's section rejoins Johnnie and his men after hearing the fight, but the sergeant is found besieged by the Bugs and he has captured a brain Bug and he uses its body as a shield. Knowing that the Bugs cannot attack the sergeant without dying, Johnnie's troopers attack them from behind, and after the fight is over, a big piece of roof in the tunnel falls on Johnnie who finds himself after waking up in a sick bay of the transport Argonne.

Operation Royalty is over for Johnnie, and he later knows that his sergeant's act of going down and capturing a royalty caste has made the operation "mission accomplished" for Johnnie's First Platoon, the Blackguards. Johnnie's sergeant is rewarded with a field commission and he is praised by Captain Blackstone as the best sergeant in the fleet. At this moment, Johnnie reveals the identity of his platoon sergeant who is his instructor he has known since his first day as a recruit; he is Charles Zim. After commanding in the successful Operation Royalty, Johnnie graduates from Officer Candidates School, becoming the lieutenant in command of Rico's Roughnecks, and he is back on the Rodger Young preparing for the climactic assault on Klendathu, with his father as his platoon sergeant. In the drop room where the Roughnecks are ready for this major strike, Johnnie gives his last instructions and the book ends with his prideful words: "To the everlasting glory of the Infantry."

4.2.2. The Education of a Soldier

The novel is structured as a bildungsroman that describes the military education of the narrator and protagonist Juan Rico, referred to as Johnnie in the novel, as he goes through recruit training and then Officer Candidates School, becoming a battle-

hardened soldier and then an officer. Johnnie joins the military service for the purpose of becoming a citizen and earning franchise, and in the process he learns the mystique of the Army and the nature and values of militarism. Rico's education begins even before graduation from high school where the course of History and Moral Philosophy, taught by former military officer Mr. Dubois, provides the basic teachings and views concerning political and moral issues that Johnnie recalls throughout his military service, and eventually discovers their merits. Upon graduation, Johnnie is still a civilian who does not know much about Federal Service except that it is the only route to the prestige of citizenship, and even the content of Dubois's course does not attract him and he regards as serving no useful purpose. At this early stage, Johnnie does not like his teacher, he thinks that "Mr. Dubois had a snotty, superior manner; he acted as if none of us was really good enough to volunteer for service. I didn't like him" (23). Even though, Johnnie's education begins in high school with Dubois's expositions on the centrality of violence to the course of human history as he proclaims to his students that "Violence, naked force, has settled more issues in history than has any other factor, and the contrary opinion is wishful thinking at its worst. Breeds that forget this basic truth have always paid for it with their lives and freedoms" (26). And he justifies by adding, "Anyone who clings to the historically untrue –and thoroughly immoral- doctrine that 'violence never settles anything' I would advise to conjure up the ghosts of Napoleon Bonaparte and of the Duke of Willington and let them debate it" (26). However, Johnnie's grasp of Dubois's ideas begins only after he enlists in the Army where he finds himself calling back all the precepts and teachings of Mr. Dubois while going through the different stages of his military training as a private in the Mobile Infantry and then as an officer.

The first experience of Johnnie in the Military after enrolment is taking the Federal Service oath which he repeats after the Fleet Sergeant, and then he recalls Mr. Dubois:

> *Mr. Dubois had analyzed the Service oath for us in History and Moral Philosophy and had made us study it phrase by phrase –but you don't really feel the size of the thing until it comes rolling over you, all in one ungainly piece, as heavy and unstoppable as Juggernaut's carriage ... I didn't know yet what I was, but I knew what I wasn't (34).*

As training begins at Camp Currie and it gets every day tougher and harder with severe punishments for any misconduct or violation of the rules, Johnnie realises that he is a soldier, but he wonders, "Was boot camp more cruelly hard than was necessary?" (34). Indeed, during one of the route marches, the recruits spend a day and a night full of hardships with no bed bags and no rations; Johnnie describes their state during the night: "You migrate from one condition to the other all night long ... never quite waking up and never really sound asleep. All this makes a night about a hundred years long ... I felt like a corpse" (57). A few weeks later, Johnnie was "dumped down raw naked in a primitive area of the Canadian Rockies and I had to make my way forty miles through mountains. I made it –and hated the Army every inch of the way" (58). Like many other recruits, Johnnie eventually considers resigning after weeks of cruelly hard training and after he witnesses the punishment of Hendrick, but the letter he receives from Mr. Dubois makes him change his mind and stay in the camp. The letter's words bring moral comfort to Johnnie who learns that everything in life has a price and that the man who chooses to serve his country should place the welfare of his nation ahead of his own even if it costs him his life. Dubois's letter says,

> *The noblest fate that a man can endure is to place his own mortal body between his loved home and the war's desolation ... This is an immutable, true everywhere, through all time, for all men and all nations ... Good luck, trooper! You've made me proud (91).*

This praise for the military man echoes the answer of Johnnie when Dubois asks him in the high school course about the difference between the soldier and the civilian; Johnnie gives the exact words he has read in the book: "The difference lies in the field of civic virtue. A soldier accepts personal responsibility for the safety of the body politic of which he is a member, defending it, if need be, with his life. The civilian does not" (26), but Johnnie does not understand the meaning of the statement while at school and before experience.

After reading the letter, Johnnie is led to hark back to another of Dubois's lessons in high school about the theory of value which Dubois defines as being always relative to a particular person and can never be absolute, because value depends first on the use of the thing by an individual and second on its cost to him. And according to Dubois,

> *Nothing of value is free. Even the breath of life is purchased at birth only through gasping effort and pain ... The best things in life are beyond money; their price is agony and sweat and devotion ... and the price demanded for the most precious of all things in life is life itself –ultimate cost for perfect value (93, 94).*

In the same lecture, Dubois includes a critique of Marxism and Marx's labour theory of value which reflects the book's origins in the Cold War period and its anti-communist message. He farcically demolishes Marx's theory of value which claims that human labour can transform anything into something of value, and that human action always increases the value of whatever is being acted upon. He argues,

> *The Marxian definition of value is ridiculous. All the work one cares to add will not turn a mud pie into an apple tart; it remains a mud pie, value zero. By corollary, unskilful work can easily subtract value; an untalented cook can turn wholesome dough and fresh green apples, valuable already, into an inedible mess, value zero ... These kitchen illustrations demolish the Marxian theory of value –the fallacy from which the entire magnificent fraud of communism derives- and illustrate the truth of a common-sense definition as measured in terms of use (92).*

Given this interpretation, Dubois describes Marx as "the dishevelled old mystic of *Das Kapital*, turgid, tortured, confused, and neurotic, unscientific, illogical, this pompous fraud Karl Marx" (92). As Johnnie recalls the teachings of his instructor, he does not display or show any form of disapproval or criticism of Dubois's ideas, and even in the classroom no personal opinion is provided by the students and all discussions are limited to Dubois's questions and the students' answers. Johnnie appears as a passive recipient ready for indoctrination, not only because of the military discipline which requires devotion, sacrifice and submission to the rules, but also because of the personality of the individual shaped by a society ruled by military bureaucracy.

The process of education continues through both the lectures of Mr. Dubois and the teachings of his military instructors, and in one instance when deserting Dillinger is hanged for his crime, Johnnie consents to the virtue and righteousness of punishment to deter others from committing crimes and to spare society from the harm done by criminals. Johnnie thinks, "Our business was to guard little girls, not kill them. Our regiment had been dishonoured; we had to clean it" (111). The incident makes Johnnie deeply concerned with the question of how to keep such things from happening in society, and he instantly finds himself mulling over a lesson in the History and Moral Philosophy course in which Mr. Dubois talks about the disorders that preceded the break-up of the North American Republic back in the 20th century, and in which he extols the virtues of corporal punishment as a means of straightening out wayward juveniles, a method he compares to spanking puppies in order to housebreak them. Dubois tells his students that murder, drug addiction, larceny, assault, and vandalism were commonplace in the 20th century, and these things happened everywhere, in public parks, on the streets in daylight, and even

inside school buildings by "wolf packs of children, armed with knives, homemade guns, bludgeons" (113). Dubois explains that these juveniles became criminals because

> *many had never been spanked even as small children; there was a widespread belief that spanking, or any punishment involving pain, did a child permanent psychic damage ... Corporal punishment in schools was forbidden by law ... Flogging was regarded as 'cruel and unusual punishment' ... that period was loaded with pre-scientific pseudo-psychological nonsense (115).*

Therefore, Dubois accuses society of having been too soft on young people, encouraging them to ask for their rights when in fact it should have urged them to do their duty. He considers that "the basis of all morality is duty" (119), and he claims that "nobody preached duty to these kids in a way they could understand –that is, with a spanking. But the society they were in told them endlessly about their rights ... No nation, so constituted, can endure" (119-120).

In addition, Dubois relates duty to a theory of morals, deeply rooted in the individual's instinct to survive, which can be elaborated through training, experience, and hard sweat of the mind, going high up the scale from self-interest (personal survival) to survival of the family, survival of the nation, and then of the human race. Dubois's theory of morality and duty is in fact intended to glorify the military man whose moral sense of duty makes him capable of climbing high up the moral ladder to achieve the highest morality, that of loyalty to humanity. Meanwhile, Dubois discards the whole notion of unalienable rights (life, liberty, and the pursuit of happiness) which he regards as nonsense. He argues,

> *What 'right' to life has a man who must die if he is to save his children? If he chooses to save his own life, does he do so as a matter of 'right'? If two men are starving and cannibalism is the only alternative to death, which man's right is 'unalienable'? And is it 'right'? As to liberty, the heroes who signed the great document pledged themselves to buy liberty with their lives. Liberty is never unalienable; it must be redeemed regularly with the blood of patriots*

> *or it always vanishes. Of all the so-called natural human rights that have ever been invented, liberty is the least likely to be cheap and is never free of cost ... the 'pursuit of happiness'? It is indeed unalienable but it is not a right; it is simply a universal condition which tyrants cannot take away nor patriots restore (119).*

Thus, for Dubois, the only rights humans have are those for which they are willing to fight and die.

After Basic Training at Camp Currie, Johnnie's education includes further indoctrination at Officer Candidates School, culminating in the History and Moral Philosophy course taught by Major Reid who extols the virtues of an all-volunteer army instead of a force of conscripts. Major Reid argues in favour of the rule by veterans of the military which he regards as the ideal political system for the welfare of the state and the maintenance of democratic values in society. For Major Reid, the members of a volunteer army are worthy to vote and to wield political authority because they learn the values of duty and social responsibility better than conscripts and civilians and because "every voter and office holder is a man who has demonstrated through voluntary and difficult service that he places the welfare of the group ahead of personal advantage" (182). Indeed, the highest degree of social responsibility requires "each person who wishes to exert control over the state to wager his own life –and lose it, if need be- to save the life of the state" (184), and this voluntary offering of one's life for the benefit of the state is the most sincere demonstration of moral behaviour and qualities. On the other hand, Major Reid abhors the reliance on conscripts, and he considers that it is difficult "to instil moral virtue –social responsibility- into a person who doesn't have it, doesn't want it, and resents having the burden thrust on him" (184), and he insists that

> *Social responsibility above the level of the family ... requires imagination – devotion, loyalty, all the higher virtues- which a man must develop himself; if he has them forced down him, he will vomit them out ... This is why we make*

it so hard to enrol, so easy to resign (184).

Therefore, by offering suffrage and political power to veterans who have a morally superior position, the new ruling class performs far better than any other ruling class in history because its members learn and understand, by serving their nation through Federal Service, how to use power and authority, including the power of franchise, to guarantee the welfare of the state and of the citizens who are not bound to make such sacrifice. In his lecture to the cadets, Major Reid glorifies the new system of governance by stating,

> *Our system works quite well ... Personal freedom for all is greatest in history, laws are few, taxes are low, living standards are as high as productivity permits, crime is at its lowest ebb, ... we have democracy unlimited by race, color, creed, birth, wealth, sex, or conviction, and anyone may win sovereign power by a usually short term of service (182-183).*

At the same time, Reid criticises all the methods of democracy practised in the past, including "the antlike Communism" (181) and Plato's theory "under the misleading title *The Republic*" (181), and he even rejects governance by the intellectual elite because, he thinks, "the pursuit of science, despite its social benefits, is itself not a social virtue; its practitioners can be men so self-centered as to be lacking in social responsibility" (180). Major Reid does not dismiss the fact that service men are not brighter than civilians and that in many cases civilians are much more intelligent; however, the jobs reserved for civilians are called "soft safe" jobs which do not involve fighting and hardships. Johnnie tells us in describing the routine work aboard the Tours that

> *Civilians are like beans; you buy 'em as needed for any job which merely requires skill and savvy. But you can't buy fighting spirit ... all "soft, safe" jobs are filled by civilians ... An M.I. doesn't pull strings to get a soft, safe job ... The M.I. is a free man; all that drives him comes from inside –that self-respect and need for the respect of his mates and his pride in being one of them called morale, or esprit de corps (208).*

While military service involves a willingness to sacrifice the individual in the interest of the group, the cadets at O.C.S. also learn that individual liberty and personal sacrifice should go together. In this respect, Major Reid refers to the prisoners of war and to the question whether one prisoner is enough reason to start or resume a war in which millions of people may die, and he asserts, "Why hesitate over one man? ... It doesn't matter whether it's a thousand –or just one ... you fight" (178). Later in the novel, Johnnie evokes that willingness of the military to sustain huge losses and sacrifice entire platoons to rescue a single soldier is a natural survivalist tendency, and he claims that it is "a racial conviction that when one human needs rescue, others should not count the price," suggesting that this tendency is "the unique strength that wins us a Galaxy" (223). After the course of Major Reid, the military education of Johnnie ends with the instructions given by Colonel Nielssen to the candidates shortly before Operation Royalty. Colonel Nielssen affirms that being a leader in combat is the hardest task an officer may experience in war, and he addresses the cadets:

> *Suddenly you are the Boss, Commanding Officer Present –and you discover with a sickening shock that fellow human beings are depending on you alone to tell them what to do, how to fight, how to complete the mission and get out alive. They wait for the sure voice of command –while seconds trickle away- and it's up to you to be that voice, make decisions, give the right orders ... and not only the right ones but in a calm, unworried tone. Because it's a cinch, gentlemen, that your team is in trouble –bad trouble! – and a strange voice with panic in it can turn the best combat team in the Galaxy into a leaderless, lawless, fear-crazed mob ... Sometimes, in cracking up, the misfits die. But the tragedy lies in the loss of others ... good men, sergeants and corporals and privates, whose only luck is fatal bad fortune in finding themselves under the command of an incompetent (191).*

Then Nielssen calls on the virtues of devotion and sacrifice, and he tells the cadets, "the course is very hard –because what will be expected of you later is still harder"

(192), and in his reaction to how rough the mission is going to be, Johnnie thinks, "it's a lot easier to *die* than it is to use your head" (191).

Learning all the lessons well, Johnnie ultimately accepts their message without question, and he emerges from his education as a trained fighting machine, ready to go forth to defend the Federation everywhere in the Galaxy as a member of the Mobile Infantry. Although the book is told in the first person and the story tells about the making of a professional soldier from a hardly-out-of-adolescence boy, Juan Rico does not play a star part in the course of the novel and in the crucial events, and does not stand for any great individuality in personality. Johnnie is like the other recruits who choose to join the Federal Service and go through hard military training to be members of a highly disciplined elite corps and to assume the burden of duty and responsibility. Like the other trainees, whose identities are only their names, Johnnie is not described physically or psychologically, and his social life is completely dismissed, giving way to the life of a soldier whose feelings and thoughts are restricted to glorifying the virtues of war and his function is limited to the supply of violence for the benefit of all humans under the Federation's system. Except that he comes from a wealthy family of Filipino origin and that his father opposes his enlistment early in the novel, the reader knows nothing of Johnnie's likes and dislikes, his tastes, and his personal life outside the military.

Moreover, the course of the novel does not bring much change in the personality of Johnnie who goes through a process of transformation, via theoretical teaching and physical training, which redefines his identity, his commitment and motivation. Johnnie is presented early in the novel as a vivid and competent character who is eager to learn and to please, but as a raw youngster, he is naturally ignorant and

naive and in need of mentorship. Johnnie reports, "I had been rather a big man around school; swimming team, debate team, track squad, silver medal in the annual literary contest, chairman of the homecoming committee ... A well-rounded record" (36). Besides, the placement officer in the recruiting office lets him know that his instructor Mr. Dubois "seems to think well of you," but Dubois also "says that you are not stupid, merely ignorant and prejudiced by your environment. From him that is high praise" (38). Already competent and ready to absorb whatever ideas and doctrines would be instilled in him, Heinlein provides Johnnie with mentors both in the course of History and Moral Philosophy which gives him the theoretical knowledge and in military training which makes this knowledge a real and living experience for him. Indeed, Heinlein regards the theoretical course of History and Moral Philosophy and the physical military training as essential for the Federation system to be workable and for the soldiers to assume the burden of serving this system and to take up the responsibility of power in society. By the end of the novel, Johnnie emerges as a competent, tough, and smart soldier and then as an officer with new motivations and in full glory who takes pride in his job, that of making war and killing.

Outside of duty and service, not too much is important in the human relationships of Johnnie, and even when his mother is killed in the destruction of Buenos Aires, he does not express any feeling of grief and pain, and yet he is deeply affected by the death of Lieutenant Rasczack whom he considers a father for all the soldiers:

> *We weren't really hurt until the Lieutenant bought it. I guess that was the worst time in all my life. I was already in bad shape for a personal reason: My mother had been in Buenos Aires when the Bugs smeared it ... What did matter was that our family had had its head copped off. The head of the family from which we took our name, the father who made us what we were (144-145).*

For Johnnie, the Military is his family; it is of primary importance and value since he has devoted his life to the service of the Federation for the benefit of all its residents, and not for that of individuals. He describes his new life as a soldier with the Roughnecks with great enjoyment as if within a real family:

> *We were full-fledged Roughnecks, members of the family, called by our first names, chewed out on occasion without any feeling on either side that we were less than blood brothers ... We even called non-coms by their first names on any but strictly duty occasions ... The Lieutenant was father to us and loved us ... Jelly [Jelal] was mother to us and was close to us and took care of us ... We were well taken care of, body and soul (140-141).*

On every occasion in the novel, Johnnie stresses the "esprit de corps" characteristic of the Mobile Infantry where the moral values of devotion, duty, and sacrifice are more sacred than gaining franchise and being a full citizen. When Johnnie decides to go career and become an officer, he hears again Mr. Dubois's words in his mind: "Citizenship is an attitude, a state of mind, an emotional conviction that the whole is greater than the part ... and that the part should be humbly proud to sacrifice itself that the whole may live," and he therefore realises,

> *It wasn't the process of voting that made a citizen –the Lieutenant had been a citizen in the truest sense of the word, even though he had not lived long enough ever to cast a ballot. He had "voted" every time he made a drop. And so had I! ... I know at last what Colonel Dubois had been talking about (162-163).*

Johnnie eventually admits that he cannot live out of the Mobile Infantry; he feels he does no longer fit in the civilian life, and when he rejoins his fellow troopers as a lieutenant on the Rodger Young in the end of the novel, he feels the delight of getting back home: "I turned back and went on reading ships' names ... Then came the sweetest sound in the world: '*-shines the name, shines the name of Rodger Young!*' I grabbed my kit and hurried. 'Home is where the heart is' –I was going home" (260).

So, Heinlein's major concern in *Starship Troopers* is to make war glorious and to exalt the military and the common soldier, and he is in no way interested in portraying the individual person as particularly singular. In fact, Johnnie's personality is hardly distinguishable from that of the other troopers in the M.I. who appear as "blank-faced crowd" (Panshin 1968: 69), ready to perform with competence and skill what their superiors ask them to do. They are machine-like warriors who "supply the violence" without thinking, and as Sergeant Zim explains to his troopers,

> *War is not violence and killing, pure and simple; war is controlled violence, for a purpose. The purpose of war is to support your government's decisions by force ... But it's not your business or mine to decide the purpose of the control. It's never a soldier's business to decide when or where or how –or why- he fights; that belongs to the statesmen and the generals ... We supply the violence; other people –"older and wiser heads," as they say- supply the control (63).*

Moreover, we find that even Johnnie's father, who initially opposes his son's decision to join the Federal Service, yields to the power of the military and joins up, not for the personal reason to avenge the killing of his wife, but after being convinced of the worth of the military, as he tells his son when they meet,

> *Certainly, losing your mother had a great deal to do with it. But I didn't enroll to avenge her ... You had actually done something that I knew, buried deep in my heart ... You merely helped trigger it ... I had to perform an act of faith. I had to prove to myself that I was a man. Not just a producing-consuming economic animal ... but a man (170-171).*

Accordingly, Heinlein claims that the military and the virtues of war are "man's noblest fate," and yet they engulf the individual man, dissolve the self, and inhibit the development of individualised personality. In his analysis of *Starship Troopers*, science fiction writer and critic Poul Anderson says, "War is a permanent phenomenon and the soldier is the highest form of life. Then Man does not exist.

Only men and organizations of men. Man is merely a statistical concept" (Quoted by Panshin 1968: 112).

Although the characters in Heinlein's novel enjoy the democratic ideals of equality and individual freedom, and Federal Service is submitted to the rule of free choice, they are treated collectively as machines submitted to the government and military authorities. The disturbing thing in Heinlein's depiction of his characters, and for which he has been harshly criticised, is that he glorifies the system under which the characters live and perform, and he praises the soldier in his subordinate position as a servant of the system. Besides, the denial of individuality is further enhanced by the use of technologically advanced weapons and more especially the original powered suit which transforms the soldier into a killing machine that performs on a highly mechanised and fantastic scale. A whole chapter (Chapter 7) is devoted to the detailed description of the fighting suit, which Johnnie qualifies as the deadliest personal weapon ever built, along with the spaceships and the capsules used in dropping. The suit allows its wearer to be totally mobile by using built-in jets, negative feedback and complex circuitry. It is powered, armoured, and equipped with electronic senses, and has fittings that amplify the wearer's movements, three audio circuits, various electronic viewscreens, and life support systems that enable the soldier to be free to follow his "trade, slaughter" (103). Johnnie falls in love with the powered suit and in a burst of sentiment he says, "If I ever find a suit that will let me scratch between my shoulder blades, I'll marry it" (104). Then he reports in detail the characteristics of the suit and how it works:

> *Our suits give us better eyes, better ear, stronger backs (to carry heavier weapons and more ammo), better legs, more intelligence ... more firepower, greater endurance, less vulnerability ... A suit is not a ship but we can do many things that no ship –air, submersible, or space- can do ... Suited up, you look like a big steel gorilla, armed with gorilla-sized weapons ... But the suits*

> *are considerably stronger than a gorilla ... Two thousand pounds of it, may be, in full kit –yet the first time you are fitted into one you can immediately walk, run, jump, lie down, pick up an egg without breaking it ... and jump right over the house next door and come down to a feather landing (99-101).*

In addition, psychological conditioning is extended to include posthypnotic suggestion; that is the soldiers are empowered by injections and hypnotic preparation which render them fearless and more ferocious. With all these arrangements, the soldiers, or "the prosthetically enhanced troopers" (Merrick 2003: 246), are no longer human beings with emotions and feelings as complex and rich as those in ordinary life; they are depicted as an omnivorous machinery of death that dissolves the individual into the collective. William Thompson refers to this technological development of warfare and its impact on humans as "a technologically driven evolution in which humans become willing co-participants. This was arguably anticipated by the soldiers wearing massively armed fighting suits in R. Heinlein's *Starship Troopers*" (Quoted by Westfahl 2005: 172).

So Heinlein's presentation of his characters in ***Starship Troopers*** is in fact a depiction of a reality in which the individual man loses his identity and self in the face of the overwhelming powers of government and the military and the dominance of technology. Scott Sanders identifies the powers that annihilate the individual self in contemporary society, stating that "Governments, armies, multi-national corporations –all large institutions do in fact treat individuals as if they were elementary particles, statistically defining humans in terms of markets, services, life-expectancies" (Sanders 1979: 136). While Heinlein's primary concern in ***Starship Troopers*** is to sow ideas and doctrines about a militaristic system and to lecture on the morality that sustains it and makes it workable, the characters are relegated to a subordinate position and are treated as a collective entity whose major role is to

propagate these ideas. In this respect, Johnnie's instructors, both in the theoretical course of History and Moral Philosophy and in military training, stand as spokesmen and mouthpieces for Heinlein's ideas and philosophy with no attempt made to individualise them. Mr. Dubois stands out as the vehicle for the preponderance of a moral and philosophic background of a new system, preaching the "utopian" future society which emerges following the decadence and collapse of the democracies of the twentieth century. Likewise, Major Reid is a worshipper of symbolic logic which serves to argue for his ideas and prove his theories. While discussing the theory of moral behaviour, Major Reid addresses Johnnie, "Mr. Rico, this is an exact science. You have made a mathematical statement; you must give proof ... Bear in mind that this is science, not wishful thinking; the universe is what it is, not what we want it to be" (179, 183). The result of Reid's teaching is that Johnnie finally admits that "everything of any importance is founded on mathematics" (258). Therefore, Mr. Dubois's and Major Reid's advocacy of a society they define as right and perfect is justified by "mathematically demonstrable, everywhere verifiable" theories (190). By making the ideas presented in the novel verifiable through mathematical logic, Heinlein attempts to cut off all debate and dismiss all other theories and doctrines which are harshly criticised and condemned by the instructors. On the other hand, the instructors in military training assume a similar role; they are commanding figures – with various military ranks- who are tough and rigidly strict, demanding strict attention to rules and laws and disposed to inflict severe punishment for the sake of a rigorous military discipline. At the same time, the officers are kind and paternal toward the soldiers, attempting to demonstrate that the military is the ideal form of life for man. In spite of their role exemplified by the delicate leadership skills of strength, competence, and invincible spirit, the commanding figures are depicted as a

collection of highly ranked officers who are equally submitted to the power of government and military machineries, and thus they appear as sketchy and static characters with no individual lives and personalities. More important, they appear as viewpoint characters who serve Heinlein's purpose of conveying his ideas and attitudes.

As far as gender is concerned, Heinlein's treatment of women characters in *Starship Troopers* is much like that of male characters since ability and competence are the most important matters. Although they appear as background figures and no woman stands out as a major character in the novel, women are fully integrated into the military structure, displaying the same qualities and efficiency as men. However, women perform different duties in the novel; in fact, it is revealed that the combat infantry is all male and that women "make better pilots than men do; their reactions are faster, and they can tolerate more gee" (5). And since all characters in the novel are subjugated to the military authority and are made subservient to a system that Heinlein pleads for, individual needs and human relationships, especially between men and women, are totally dismissed, leading all people to have just one concern: to serve the state. For instance, Johnnie meets women only between combat missions or at dinner, and he has no relationship with the opposite sex except the shallow relationship with a high school classmate, Carmen, who has also joined the Federal Service and has become an officer pilot. In describing Carmen, Johnnie does not mention her feminine qualities, but he refers to her abilities which make her apt to serve society and the state; he finds her "small and neat, perfect health and perfect reflexes –she could make competitive diving routine look easy and she was quick at mathematics" (27). When he meets her at the Officer Candidates School, he is surprised that "her blue-black hair was all gone," and he thinks that it is not practical

to take care of long hair in a warship and, "most especially, a pilot can't risk having her hair floating around, getting in the way, in any free-fall manoeuvres ... and for the first time I fully realized that she really was an officer and a fighting man" (175). So Carmen is portrayed as a female man representing the "aggressive overinflation of masculinity" (Merrick 2003: 246) in response to the highly mechanised and militarised environment.

On this account, it clearly appears that all human relationships in the novel are subordinated to military goals, and all human feelings and emotions are restricted to duty and service which seem more important in the life of characters than any personal concern. Yet, Heinlein's development of his characters in *Starship Troopers* cannot be considered a weakness; it is rather a depiction of a natural situation in which the power of the military system that Heinlein advocates excludes the development of individual characters with personality intricacies and personal concerns. Characters are homogenised with no traits to individualise them, and the primary concern of the work becomes Heinlein's social and political philosophy which has been the subject of harsh attacks by critics who regard the novel as a celebration of militarism and an attempt to indoctrinate readers into accepting this celebration.

4.2.3. The Military: The Power that Blots Out Character

In discussing *Starship Troopers*, many of Heinlein's critics have concentrated on his political ideas and attitudes and paid little attention to the work's novelistic account. For example, Jack Williamson called *Starship Troopers* "a dark, disturbing novel, set in a time of vicious space war and devoted to the glorification of the fighting man" (Williamson 1978: 30). Alexei Panshin compares *Starship Troopers* to

a recruiting film in prose, and labels it "a military polemic, any other reading is not possible," concluding that "there is no human conflict ... the narrator goes in as a boot and emerges a lieutenant, and that is all" (Panshin 1968: 94-95). Bruce Franklin states that Heinlein's novel is "a bugle-blowing, drum-beating glorification of the hero's life in military service" (Franklin 1980: 111), while Luc Sante simply claims that the work "approaches fascism" (Quoted by Dolman 1997: 196). John Brunner, on the other hand, is more explicit and he argues, "It was as much of a tract as it was a novel ... It's a very close analogy to a couple which have –Nazi Germany and Stalin's Russia- in that power is confined to members of an elite that is small compared to the population at large" (Quoted by Cogswell 1992: 173). And because of the storm of adverse protest the novel has provoked since it won the Hugo Award for best science fiction novel in 1959, military historian Dennis Showalter remarks that it was that reward that "critics and reviewers have been apologizing for ever since" (Showalter 1975: 113). In fact, being so intent upon his arguments for a military system and the moral and political philosophies which form its foundation, Heinlein sketched out his novel in such a way that his characters appear both as viewpoint characters transmitting his ideas and opinions and voices reading lines about how perfectly the system works, and also as a collective group submitted to the rules and laws and behaving uniformly for the benefit of society and the state.

In *Starship Troopers*, Heinlein attempts to articulate a perfect government which embraces both military and democratic ideals within a single state. He presents the Terran Federation as a utopian state and describes the military elite that governs the state as the best rulers in human history who have achieved unprecedented freedom and prosperity for all, including the vast majority that does not join the Federal Service. At the heart of this political utopia lies force and authority achieved by the

power of franchise limited to the veterans who have demonstrated loyalty, devotion, and sacrifice through military service. Mr. Dubois affirms,

> *To vote is to wield authority; it is the supreme authority from which all other authority derives ... Force, if you will! –the franchise is force, naked and raw, the Power of the Rods and Ax. Whether it is exerted by ten men or by ten billion, political authority is force (183).*

In order to gain this authority, the volunteer recruits have to endure hardships in training and acquire the military esprit based on the moral values of duty and responsibility for the purpose of serving honourably the state and carrying out its democratic ideals for the benefit of society at large. The key element in Heinlein's political utopia is that only responsible citizens (veterans) are worthy to obtain suffrage and to hold political power, and it is only by offering one's life for the benefit of the nation that the veteran electorate and rulers can sincerely demonstrate that responsibility. According to Heinlein's vision, morale is the backbone of service, and this is why he abhors conscription which he equates to slavery, and he contends that voluntarism is crucial. Indeed, those who are accepted for service are not forced to serve against their will, and they may resign at any time, thus renouncing their quest for full citizenship and franchise without losing their legal rights and privileges in the social life, such as freedom of speech, security, and prosperity.

In addition, Heinlein presents the oath of Federal Service that every volunteer takes upon enlistment as the recruit's sworn duty to obey the orders of the superior military officers and to perform in compliance with the laws. The recruits swear to uphold and defend the constitution of the Federation, to protect and defend the constitutional liberties of all citizens and residents, and "to perform, on or off Terra, such duties of any lawful nature as may be assigned to [them] by lawful direct or delegated authority" (33). Upon induction, the volunteers are "advised and warned of

the meaning and consequences of this oath" (33), and they are made aware that they should endure hardships to apprehend that the power of sovereign franchise they would gain entails responsibility toward the state and the non-military community. On this account, Mr. Dubois criticises the democracies of the twentieth century based on universal suffrage which brought on their decadence and collapse, and he says, "those noble experiments failed because the people had been led to believe that they could simply vote for whatever they wanted ... and get it, without toil, without sweat, without tears" (93).

And to make the system workable, different forms of punishment are practised by the government and the military, and even officers of higher ranks suffer the toughest repercussions of their lawless behaviour or actions. Colonel Nielssen tells the cadets about a lieutenant who has left his post during battle to pick up a wounded officer without orders, and because "pickup is never an excuse for breaking off battle in the presence of the enemy" (194), the lieutenant is convicted and "he was lucky not to be hanged" (194), as Col. Nielssen asserts. And to spare society from delinquents and criminals, corporal punishment is also practised amongst the civilian community, such as spanking children in schools which is adopted as the standard rule in education. Then it is stressed through Major Reid's lecture that social stability and order ensue from the fact that "revolution is impossible" against this system "despite the fact that every government in history has had such" (184). Major Reid suggests that "revolution –armed uprising- requires not only dissatisfaction but aggressiveness ... If you separate out the aggressive ones and make them the sheep dogs [through military service], the sheep will never give you trouble" (184). So, according to Heinlein's vision, the underlying premise of social order is that the aggressive people should be handled and made fit to lay down their lives for the

benefit of the state instead of rising up against it. Eventually, the soldier's job is to follow orders and supply the "controlled violence ... to support the government's decisions by force" (63), and this is the purpose of war which Heinlein expresses through his moral and political philosophy in *Starship Troopers*.

In fact, the elite military force employed by the Terran Federation is designed first and foremost to fight the permanent wars against its enemies that threaten its stability and existence. Although *Starship Troopers* describes the wars against the Skinnies and the Bugs in a science fiction context taking place in the far future, the novel refers allegorically to the position of the United Stated in the world affairs during the Cold War period. Heinlein's work is actually regarded as a transparent expression of his anti-communist views and a response to his belief that the United States was going soft in handling the Cold War affairs in the 1950's, the fact which would threaten the Western democracies and give way to the expansion of communism. Brian Aldiss states that "Heinlein wrote this book in disgusted reaction against the soft aimlessness that threatens democratic countries as severely as communism" (Quoted by Cogswell 1992: 216), and Keith Brooker notes that "*Starship Troopers* is a call to arms, a reminder that some enemies can be defeated only by force" (Booker 2001: 52). Heinlein himself claimed that he had written the novel in response to "calls for the unilateral ending of nuclear testing by the United States" (Heinlein 1982: 396). In *Starship Troopers*, Heinlein describes the Terran Federation and its galactic associates as a stable and prosperous nation, and yet surrounded by alien enemies that threaten to wipe it out and take away its wealth and galactic empire. In describing the Federation's enemies, Heinlein makes the Bugs and their ideology virtually identical to the Western vision of communism and the Soviet Union during the late 1950's, and as David Seed remarks, "political difference

is thereby naturalized into the threatening alien" (Seed 2006: 37). The alien enemies, the Bugs, are described as arachnid creatures that look utterly alike and the only distinction possible between them is made through their behaviour which allows identifying the social castes into which their community is divided. The hatred of the Bugs as an alien enemy is intensified by their particularly horrifying nature as insect-like creatures so that Johnnie regards the killing of Bugs as no different than stepping on ants.

The Bugs live in a communal society in underground holes and tunnels on Planet Klendathu and they work as a collective unit for the collective good with no consideration for individual needs and individual lives; Johnnie reports that their organisation is "more like that of ants or termites; they are communal entities, the ultimate dictatorship of the hive ... their actions were as intelligent as ours (stupid races don't build spaceships) and were much better co-ordinated" (135, 152). And in a direct allusion to communism which relinquishes individualism in favour of the communal society, Johnnie recounts,

> *Every time we killed a thousand Bugs at the cost of one M.I. it was a net victory for the Bugs. We were learning, expensively, just how efficient a total communism can be when used by a people adapted to it by evolution; the Bugs commissars didn't care any more about expending soldiers than we care about expending ammo (152-153).*

In spite of an ostensible admiration of the Bugs' collective action and attitude, Heinlein is careful to explain that communism is unnatural for human beings who cannot successfully adhere to its ideology because humans are strongly defined by their individualism and they are driven by blind self-interest and the instinct of personal survival. For Heinlein, only military discipline can control and direct this individual survivalist tendency and make good use of it. From his war experience,

Johnnie discovers the difference between the behaviour of humans and that of the alien Bugs:

> *Nobody ever saw a Bug come to the aid of another because he was wounded; they co-operate perfectly in fighting but units are abandoned the instant they are no longer useful. Our behaviour is different. How often have you seen a headline like this? –TWO DIE ATTEMPTING RESCUE OF DROWNING CHILD. If a man gets lost in the mountains, hundreds will search and often two or three searchers are killed ... Poor arithmetic ... but very human ... Weakness or strength, Bugs don't have it. Perhaps some race that never bothers to rescue an individual may exploit this human trait to wipe us out (223).*

And to avoid such fate for humans, Major Reid emphasises in his lecture the espousal of moral behaviour which he defines as "survival behaviour above the individual level –as in a father who dies to save his children" (185).

As a champion of survivalism, demonstrated through his earlier works in which the threat to the nation's security is surmounted either by sophisticated weapons or by military intelligence activities, Heinlein proclaims "a permanent state of total war" (Heinlein 1982: 162) for the nation's survival, reflecting his own frustration with Cold War diplomacy and his belief that the democratic West was constantly being outmanoeuvred by the Soviets. Heinlein's frustration was manifest in his personal life by the construction of a nuclear shelter in his house, and publicly he was so intent on expressing his indignation and fury at what he saw as a sense of betrayal by the gratuitous concessions to the Soviets of the Committee for a Sane Nuclear Policy, calling on President Eisenhower to end unilaterally American testing of nuclear weapons. In his counter-advertisement headlined "Who Are the Heirs of Patrick Henry," Heinlein argues that "the 'sane' proposals followed a pro-Soviet line which boils down to an abject surrender to tyranny" (Heinlein 1982: 214), and in 1947 he wrote to the Saturday Evening Post, "We may wake up some morning and find that the Russians have quietly beaten us to it" (Quoted by Seed 2006: 33),

predicting that the Cold War conflict would extend to space and interplanetary exploration. Out of these fears, Heinlein declares in *Starship Troopers*:

> *All wars result from the process of surviving through others ... it may be verified by observation that any breed which stops its own increase gets crowded out by breeds which expand ... Either we spread and wipe out the Bugs, or they spread and wipe us out –because both races are tough and smart and want the same real estate (185-186).*

So Heinlein justifies war as an elaboration of the survival instinct applied to the entire nation in a Darwinian struggle in which the strongest survive and the weak are destroyed, urging thereby Americans to seek greater military power to achieve this goal. And as David Seed notes in his analysis of *Starship Troopers*, "the Cold War 'two worlds' ideology is simplified into a survivalist alternative (the Bugs or Us)" (Seed 2006: 37), and in reviewing Heinlein's novel, Schuyler Miller points out, "We are up against World communism ... can we turn our backs on war as an instrument of survival for our society, when the 'Bugs' have not?" (Miller 1960: 158).

On the other hand, in his attempt to make the Mobile Infantry a force that guarantees the safety of the Terran Federation, Heinlein suggests going on the offensive for a war of attrition by forcing the enemy to maintain a defensive position, and after the raid on Buenos Aires, he makes Johnnie reflect on the popular call for retreat from other associate planets of the Federation to defend Earth and consider it a pure folly: "B.A. really stirred up the civilians and inspired loud screams to bring all our forces home, from everywhere ... This is silly, of course; you don't win a war by defense but by attack" (133). Eventually Heinlein's military strategy in deploying the Federation army as a force of attack against enemies inspired intense aversion among his critics who regard the Mobile Infantry as an army of occupation and a threat to the democratic ideals. For example, Everett Carl Dolman affirms that Heinlein's military ideas evoke "the geopolitical racist views of Nazi Germany"

(Dolman 1997: 211), and Bruce Franklin suggests that "militarism –together with imperialism- is the novel's explicit message" (Franklin 1980: 112). However, Heinlein presents the notion as a question in morality and he maintains through Major Reid's course that "the universe will let us know –later- whether or not Man has any 'right' to expand through it" (186), which implies that the moral authority for humanity's cosmic expansion will be demonstrated by its ultimate success, and in the case of defeat or being slapped down, the notion of 'right' would be renounced. But with regard to Heinlein's sense of triumphalism and his belief in American exceptionalism, humanity's task in the novel would be certainly made "mission accomplished."

Therefore, in light of Heinlein's vision of America's destiny, the military is presented as the ideal form of authority under which the individual man experiences the satisfaction of merging into a larger whole and substituting family and personal human relationships with the ultimate general interest of the nation based on the survival instinct. In Heinlein's ideal state, the soldiers act out collectively the role of national saviour and they incarnate the moral values that allow fulfilling humanity's Manifest Destiny throughout the Galaxy. In this respect, Heinlein's concern of conveying his ideas and points of view about the political affairs of his time and his expression of the Cold War fears and hysteria cannot allow a full development of characters that are determined to sacrifice their personal identity in favour of the military power that dominates every aspect of human life in the name of freedom and national security. Moreover, Heinlein's articulation of his ideas and philosophies that dominate the narrative is subtly illustrated by the epigraphs that introduce the novel's chapters to confirm with evidence the righteousness of his beliefs. The epigraphs are quotations from speeches by statesmen and military officers, or from the Bible and

the Koran, and they include: “He shall rule them with a rod of iron –Revelation II: 25” (41); “We’ve got no place in this outfit for good losers. We want tough hombres who will go in there and win” (121) by Admiral Jonas Ingram, an officer in U.S. Navy during the two world wars; “The tree of liberty must be refreshed from time to time with the blood of patriots” (130) by Thomas Jefferson; “I have nothing to offer but blood, toil, tears, and sweat” (146) by Winston Churchill; and “Whoso saveth the life of one, it shall be as if he had saved the life of all mankind –The Koran, Surah V, 32” (261). Accordingly, Heinlein saw American history as a permanent struggle for freedom, including the anti-communist hysteria of the Cold War period which constitutes the thematic background of *Starship Troopers*.

And in response to the harsh criticism his book received, Heinlein disclaims any militaristic intentions, but he affirms at the same time that the military, denied him only by ill health, is the noblest and most necessary profession. In an interview to the San Francisco Examiner in 1986, he said, “The poor bloody mudfoot, the infantryman who for centuries put his frail body on the line for home, loved ones – and for the critics who often outlive him – needs some glorification. That’s the least I can do” (Quoted by Stover 1987: 52). And in his appearance on Edward Murrow’s CBS program “This I Believe,” he declared his conviction: “You and I are free today because of endless unnamed heroes from Valley Forge to the Yalu River” (Quoted by Seed 2006: 33). In reality, although Heinlein’s ideas approved in a Cold War climate may seem extremist today, they are not so much different from the American political drives in the present time with the overdependence on the military machinery which contributes, together with other powers in society, to the suppression of individual identity and the annihilation of the self in the name of freedom. American politician Zell Miller echoed Heinlein’s words about the role of

the military in his 2004 Republican Convention Address by stating, "It is the soldier, not the reporter, who has given us the freedom of the press. It is the soldier, not the poet, who has given us the freedom of speech. It is the soldier, not the agitator, who has given us the freedom to protest" (americanrhetoric.com). Finally, Heinlein's ideas in relation to the various issues that concerned Americans during the post-war period continued to stir polemic among both science fiction and mainstream critics, and his next novel *Stranger in a Strange Land* is deeply rooted in the American cultural scene of the 1960's and it is even more radical.

4.3. *Stranger in a Strange Land*: A Novel of Cultural Revolution

Stranger in a Strange Land marked the next turning point in Heinlein's wider recognition and popularity with its growing reputation as a book of wisdom for the generation of the 1960's and after. *Stranger in a Strange Land* was published two years after *Starship Troopers* though Heinlein started to write the story a few years earlier under the title *A Martian Named Smith.* Heinlein was not satisfied with the result and he shelved the project, writing other works in the meantime, until 1961 when he submitted the final manuscript as *The Man from Mars* to Putnam. However, the editors required him to cut its original length to subtract the scenes that concern sex and religion, and the revised version was eventually published as *Stranger in a Strange Land* in 1961. In 1962, the novel won a Hugo Award for the best science fiction novel of the year, and it was the first work of science fiction to place on the national best-seller list published by the Sunday New York Times.

4.3.1. Summary

Stranger in a Strange Land tells the story of a human born and raised on Mars and his experience of adaptation to human life and culture after he is brought back to

Earth, the planet of his natural parents. Set in the not too distant future, the story is told by an omniscient narrator and begins in Part One titled "His Maculate Origin" with a history of the first expedition to Mars consisting of four married couples that form the crew of the spaceship Envoy. After a message is received from the crew that Mars has been reached, no further word is sent and Envoy is never heard of again. Twenty-five years later, after World War III has occurred and the United States has become a member of the World Federation of Free Nations, a second expedition aboard Champion commanded by Captain Willem van Tromp gets to Mars and reports that the planet is inhabited by native Martians, but finds none of the original eight astronauts. However, the crew discovers that a child named Valentine Michael Smith was born as an illegitimate son to the ship's pilot Captain Michael Brant and Mary Jane Lyle Smith, an atomic engineer and inventor of the "Lyle Drive", the propeller that powers all modern spaceships. Valentine Michael Smith, now in his mid-twenties, is the product of a totally alien culture; he is human in appearance, but in thought, habits, and mysterious powers, he is Martian.

Until the Martians insist on it, Smith accompanies the members of the Champion's crew on their return home, and on Earth he is placed in the Bethesda Health Centre, ostensibly because of his need to adapt to Earth gravity and atmosphere. However, Smith is actually detained by the government because he is, not only the heir to the fortunes of his parents, including the fortune accrued from the profits on sales of his mother's patented invention, but also the possible owner of the planet Mars due to a complex legal precedent of the Federation under an inter-galactic law known as the Larkin Decision. As Smith has never seen a human female before, he is allowed no female visitors in his hospital's guarded room where he constantly goes into deep contemplation, slowing down his bodily processes so that

doctors believe he may be dying. But Doctor Nelson, a member of the Champion's crew, assures that there is nothing to worry about because he has seen Smith in this condition many times before.

In spite of the "No female visitor rule," a curious nurse named Gillian Boardman (Jill) eludes guards and sneaks into Smith's room, pretending to perform nursing duties. Gillian offers Smith a glass of water which Smith believes is the Martian custom of "water sharing," a ritual in which two souls grow closer and become water brothers. Hence Gillian becomes the first water brother to Smith on Earth after the crew members of Champion: Dr. Nelson, Dr. Mahmoud (the linguist who knows the Martian language), and Captain van Tromp. Ben Caxton, an anti-administration news columnist, invites his girlfriend Gillian for dinner to supply him with information about Smith. Ben tells Jill that he feels Smith is held in custody because of his wealth and his political importance, and thus he asks Jill to plant an audio bug in Smith's room, which eventually captures a conversation between Smith and Secretary General Joseph Douglas, the chief executive of the World Federation. Douglas tries to make Smith sign a paper renouncing any legal claim he has to ownership of Mars and assigning it in trust to the government. When Douglas tries to force him into putting a thumbprint on the document, Smith is confused and goes into one of his death-like trances diagnosed as cataleptic withdrawals. Ben writes a column accusing the administration of holding a political prisoner and keeping him under control away from the press. While at dinner in a restaurant, Ben and Jill see on a stereo tank (TV) Joseph Douglas on the screen delivering a speech and then interviewing the man from Mars. Jill says that the man who appears with Douglas is not the real Smith, and Ben promptly realises that, since Smith has now a false public face, the government can do whatever they want with the real one. So Ben and Jill decide to

counteract the government's actions and they contrive to break Smith out and spirit him away to the protection of an acquaintance of Ben's who is too prominent to be squeezed. The man is Jubal Harshaw, an irascible and individualistic old doctor, lawyer, and popular fiction writer, who holds in contempt the establishment and the society's customs and culture.

Unfortunately, Ben is kidnapped by the Federation Special Service agents and Jill proceeds alone and succeeds in getting Smith out of the hospital in a nurse's uniform and she takes him to Ben's apartment. There, they are invaded by a government agent and a police officer, but Smith makes them disappear instantly by using his mysterious powers after he has grokked that they intend to harm them ('grok' is a word invented by Heinlein meaning to understand and grasp fully the essence of a person, thing or situation). Then Smith goes into his usual trance, withdrawing himself at minimal levels of respiration and blood circulation. Knowing that she cannot wake him, Jill loads Smith into a large bag and takes him to the home of Jubal Harshaw in the Pocono Mountains of Eastern Pennsylvania. In Jubal's luxurious house, Smith is to be born again on Earth; he demonstrates extraordinary powers and abilities and superhuman intelligence, but he is still at this stage an infant with his naïveté and innocence and he has to learn too much of human ways and culture.

In Part Two, titled "His Preposterous Heritage", Jubal Harshaw provides shelter for both Smith and Jill and decides to help Smith in learning about human ways, and also to take his cause in fighting for his rights against the government. In his cultural infancy, Mike, as he comes to be called from this point in the novel, comes under the tutelage of Jubal Harshaw who becomes in effect his guardian as well as his mentor.

And instead of simply preparing Mike for living in the human world, Jubal concentrates in most parts of the novel on taking on the established order in his conversations and commentaries and on what is wrong with this world in culture, politics, and religion. In addition to Jubal's sceptical pragmatism which sounds the dominant tone in this part, Smith demonstrates his abilities and powers which reflect his Martian training and upbringing. It is revealed that Mike's Martian heritage is encoded in the Martian language, fragments of which are given through translations into English which Mike learns rapidly although he does not understand or grok certain concepts that do not exist in the Martian culture. The Martian race is very brilliant with extraordinary physical and psychic powers, and the native Martian goes through various stages of life, the last of which is called "discorporation," the Martian concept for death. When the body discorporates, the Martian becomes an "Old One" and joins a large body of discorporate Martians –Old Ones- who govern society through spiritual guidance. Moreover, the paucity of natural resources on Mars and the importance of water to a dry planet have developed certain customs among the Martian race, such as the eating of the bodies of the dead which they regard as "not wasting food," and an intimate ritual known as water sharing which signifies a total commitment to another individual by offering him the precious substance. And more important in the Martian culture is the concept of "grokking" which signifies knowledge in a holistic way, including intellect, intuition, and even physical sensing.

During his stay in Jubal's house, Jubal and his three beautiful secretaries – Myriam, Dorcas, and Anne- and his male assistants, Larry and Duke, learn about Mike's heritage as preposterous from a human standpoint, except that Mike can show its validity. Mike is capable of levitation, suspended animation, telekinesis, telepathy,

making things and people disappear when he groks them to be wrong, and controlling his own metabolism. In addition to these powers, Mike makes remarkable progress in learning human customs and behaviour with the help of Jill, and he is bemused by the cultural set of humans as he comes to know it by listening to Jubal, reading the encyclopaedia, and watching the stereovision. After being taught to read in English, Mike begins to absorb information from Jubal's library, and he spends much time in the swimming pool, allowing himself to sink to the bottom and stay a long time, which initially frightens his friends. Then Mike asks to discuss religion with Jubal and he wants to know who the Earth equivalents of the Old Ones are after he watches a religious service on the stereovision by an organisation called the Fosterites. Jubal is agnostic and he is unconvinced by evidence for or against the existence of God, and yet he explains the basic concepts of religion to Mike who is confused and cannot understand that Earthlings have many different religions, all of which claim to have the correct interpretation of God's truth. In a revelatory moment, Mike realises a connection between his Martian concept of grokking and the Earth concept of God, and he thinks that all living creatures are "God" because grokking is so reminiscent of the divine that Mike translates it as an expression of address to his brothers: "Thou art God".

As the government is still searching for Mike and Jill, the police arrive to Jubal's house to arrest them, but Mike hides in the bottom of the pool and, sensing that his friends are in trouble, he is able to remove his spirit from his body and to come above water to watch what happens. After he groks wrongness in the police and their armoured squad cars, he immediately whisks them all out of existence. After this incident, Jubal decides to set Mike free from his position as a pawn in a power struggle and he succeeds with his cleverness and wit to gain access to Secretary

General Douglas through his wife's astrologer to settle things as far as Mike's alleged possessions are concerned. Jubal Harshaw, cunning and wily, manoeuvres Douglas into a de facto recognition of the Man from Mars as an ambassador for the Martians and not the owner of the planet because the human law which would have granted ownership of Mars to Smith cannot be applied to a planet already inhabited by an intelligent race. Then Jubal proceeds to liberate Mike from the worries of managing his economic inheritance and financial affairs by making Douglas himself accept to be Mike's attorney-in-fact. Besides, Jubal succeeds in making Ben Caxton released before these arrangements are made.

Part Three, titled "His Eccentric Education", continues with Mike's education as he gains more knowledge about human ways and culture. This part includes his initiation into sex with one of Jubal's secretaries, which he realises is a better way of "growing together" because it involves grokking the whole person, body and soul. As a celebrity, Mike is invited to visit the Tabernacle of the Fosterites led by Supreme Bishop Digby. Accompanied by Jubal and Jill, Mike attends a Fosterite service in which he discovers the precepts of the Fosterite Church of the New Revelation, a populist church where sex, gambling, and drinking are not considered sinful, but practised even within the church building. Before leaving, Mike groks wrongness in the church and he discorporates Bishop Digby without telling Jubal and Jill about his act. At home, Mike appears deeply confused and he goes into a trance for many days after which he decides to leave Jubal's house and go out to learn more about humanity. Mike takes Jill as a companion and he tours the world to experience the real life of humans by placing himself in many environments and situations. He works as a magician, with Jill as assistant, in a travelling carnival where they share water with a tattooed lady in the show named Patricia "Patty" Paiwonski. After Mike

leaves the carnival because of his lack of showmanship, as the owner tells him, Patty visits Mike and Jill in the hotel where they both learn about the relationship between showmanship, sex, and art when they see the "sacred" Fosterite illustrations tattooed on her body. Then Patty discovers Mike's mysterious powers and she believes that he is the Archangel Michael who has descended to Earth, and after the ritual of water sharing, Mike makes love to both Patty and Jill.

After the carnival experience, Mike and Jill head for Las Vegas where Jill gets an engagement as a showgirl and she learns enough of Martian ways that she can communicate telepathically with Mike. Jill finds she enjoys being looked at by men and lets Mike know telepathically what she looks like in the men's eyes, and thus Mike groks human desire. In the meantime, Mike becomes more interested in religion which he believes must contain answers, and yet he is totally confused by the multiplicity of Earth religions and Earthlings' philosophies. So he spends much time swallowing the libraries and reading all the sacred books and books on theology and philosophy. In spite of Jill's attempts at interpretation, humanity remains a mystery for Mike and at one moment he feels what is missing in his make-up is a sense of the comic; Mike does not laugh and he has always been afraid of the physical act of laughing which he finds painful, though it supposedly brings joy. In California, Mike asks Jill to visit the zoo where he finally learns the irony of laughter by watching monkeys. After Jill throws a peanut to a monkey, a larger monkey steals the peanut from the first one that does not fight back, but rather finds an even smaller monkey, totally uninvolved in the original fight, to beat up. Mike laughs uproariously for the first time and he feels that he now groks people who laugh to sooth their pain. He realises that the scene of the monkeys is not only funny but also tragic because the funny thing is always the wrong thing. Having understood people and the secret

of the complementarity of joy and pain, Mike feels that there is no need for people to be so unhappy because of sickness, hunger, and fighting, and he decides to help them. Nevertheless, Mike is not conscious of any fixed way to do it, and the first step he takes is his decision to be ordained as a clergyman.

Part Four, "His Scandalous Career", gives a summary of Mike's adventures through Jubal who follows Mike's career when he joins the Union Theological Seminary from which he is thrown out because of his unconventional beliefs as he is kicked out from the army. Finally, Mike goes through college and gets various diplomas, and then he is ordained as a preacher and he founds his own church, the Church of All Worlds. Ben visits Jubal to tell him about what he has seen in Mike's church and he finds Jubal in his sculpture gallery which contains replicas of the greatest sculpture in the world, including those by the French Auguste Rodin. After his lecture on art, Jubal informs Ben that his secretary Myriam and Dr. Mahmoud got married and that two of his secretaries are pregnant, and Mike is possibly the father. Then Ben reports to Jubal his experience during his visit to Mike's church and he seems shocked by the practices of its followers. The church is organised into seven circles going up in progress through learning to the Innermost Temple called the "Nest" where the brothers teach the members the Martian language and help them acquire psychic powers. Besides, Mike's new religious cult combines the psycholinguistic perceptions and powers of Martians, free sex, and elements from Earth's mystery religions, with the only purpose of achieving happiness for all humanity. Although Ben has spent a night with Dawn Ardent, a Fosterite who has joined Mike's church, he expresses his uneasiness with the concept of nudity adopted by Mike and his followers, and he is terrified when Mike and Jill try to engage him in a group sex, so he takes his clothes and runs out of the church. Jubal explains that

Ben cannot cope with that possibility because of his selfishness and jealousy (he loves Jill), and he argues Ben into going back to the church to join the perpetual sacred round, claiming that if he were twenty years younger he would join himself. A week later, Ben sends Jubal a message telling he is with Mike studying Martian. Meanwhile, Jubal expresses his worry about Mike, thinking he may meet an end similar to that of Christ.

Part Five, "His Happy Destiny", opens with the news that Mike's church has been burnt and destroyed by the outraged public for practising "blasphemy" and that Mike has been arrested by the police. Mike is able to teleport his followers and the church's possessions to safety in a hotel he owns although his body is in prison curled up in withdrawal. Later, he escapes from prison by disintegrating the prison bars and doors and stripping the police of their arms. Jubal joins Mike in the hotel where he meets many friends and acquaintances who have joined the church such as the members of the Champion crew, Patty, his secretaries, and his assistant Duke. During the night, Dawn Ardent persuades Jubal to "grow closer", and the next day he discovers that the entire nest has been present and shared their ecstasy. Then Jubal argues with Mike that he has a fine system, but humans are not ready to accept the responsibility of being "gods", and thus he must show people the truth. At that moment, a hostile crowd gathers outside the hotel and Mike presents himself to the crowd, stripping off his clothes and letting them stone him to death. All Mike's followers are awed by his showmanship except Jubal who seems to feel the loss as of his own child. Heartbroken, Jubal attempts to commit suicide, but he is saved by a vision of Mike who convinces him that it is not yet time for him to discorporate. Jubal and the other followers consume Mike's body in the form of a broth, and Jubal decides that a statue of Mike be erected on the spot where he is murdered and be

converted into a memorial. Mike's comrades discuss their plans to found new temples, and Jubal is back home where he begins to learn Martian and to write a stereoplay based on the events of Mike's life, to which he gives the title "A Martian Named Smith." The book ends with a scene in Heaven where the founder of the Fosterite Church receives the assignment of Mike as an Archangel.

4.3.2. Valentine Michael Smith and Jubal Harshaw: The Teachers of a Generation

In the early 1960's, science fiction was so eager to be taken seriously as literature dealing with problems in an aesthetic way and to get away from the stigma of action-adventure stories in outer space and tales of horrific futures, and Robert Heinlein, who was known as a hardware specialist in his early career, moved very early to writing a different kind of science fiction more in tune with the sixties, a fiction which places the emphasis on experimental modes of living in reaction to the pressures in contemporary society. The result is that *Stranger in a Strange Land* comes as the most complicated and longest novel which operates on more than one level: it is an adventure story in the first third of the book (spiriting Mike to safety and winning him his freedom and inheritance), a satire in the second third (questioning and throwing doubt on Western political, religious, and cultural values), and the founding of a new religion in the last part. In this plot combination, a lot of themes and elements come together to express a point of view of Western society as well as to formulate alternate social modes in contrast. The novel's themes and elements include the supernatural powers which are made rational, religion as a negative and positive force, sex as an integral part of spirituality, and a revolutionary subversion of society. In spite of its complicated nature, at the centre of the novel is

Mike's story, if we can believe the titles of the five parts, his experiences as a stranger on Earth as a strange land, and his martyrdom which recalls one of the oldest myths of mankind, that of the divine leader's sacrifice to liberate his followers. In order for Mike's story to gain full sway, characterisation seems the key element in this respect.

The cast of characters in ***Stranger*** is a mixed lot concerning origin, creed, social status, profession, and role in the story. But the only characters approaching certain depth and consistency are Mike and Jubal Harshaw who exchange roles and appear in the foreground as the protagonists of the novel. Indeed, they exercise an authoritative control over the rest of the characters and hold most of the novel's ideas and philosophies. In the novel, Mike and Jubal cannot exist as separate characters and thus cannot be examined separately because their experiences and destinies are fully intertwined. Mike or the Man from Mars is a unique type of character in Heinlein's science fiction and his experience is as strange as his personality. Born on Mars to human parents and raised by the Martian race, Mike is unlike any other Martian because of his human physiology, and he is unlike any other human because of his Martian ways and abilities. On Earth, Mike is a fresh character type, unconstrained by religious, political, and social rules, and many Earth concepts and customs such as sex, desire, love, jealousy, lying, and clothing are utterly foreign to him. In spite of his innocence and naïveté, Mike is superior in every way; his mental abilities and psi powers, which human beings assume are impossible, allow him, in James Blish's words, "work every major miracle, and most of the minor ones, which are currently orthodox in Campbellian science fiction" (Quoted by Aldiss 2001: 333). In addition, his culture and customs are entirely Martian and they include mainly the rituals of water sharing among brothers and eating the bodies of the dead.

While the former symbolises brotherhood and "growing together," the latter symbolises bodily continuity of the species when the soul changes state and lives on. In Martian philosophy, death or discorporation is not a sad or tragic thing because it allows the soul to join the wise Old Ones who rule the planet, and if a water brother wishes a Martian to will his body to die, he will be delighted to comply. Under the spiritual guidance of the Old Ones, there is no "wrongness" or evil on the planet and Martians live happily with no competition and no fighting and they even die happily as well. Mike is the product of this culture which leads Jubal to say in his conversation with his assistant Duke,

> *"Jubal, there is something about Mike that makes you want to care of him."*
>
> *"I know. You've probably never encountered honesty before. Innocence. Mike has never tasted the fruit of the Tree of Knowledge of Good and Evil ... so we don't understand what makes him tick." (177)*

The five parts of the novel represent stages in the development process of Mike as he begins to learn to survive in the strange big world he finds himself in and to understand the human race and its culture and customs. Unlike Heinlein's protagonist in ***Starship Troopers*** who has to learn to put up with the limitations and restrictions of the military system, Mike is ideally equipped to found his own religion against all kinds of restrictions in society and the only thing missing in his make-up is his understanding of human beings. So Mike comes under the protection of Jubal Harshaw, a rich old eccentric man who performs multiple functions depending on the circumstances and he is the man who knows enough to explain things to everyone in the novel, and therefore he is Mike's ideal mentor. Jubal is old and infirm, but he is one of the strongest and most confusing characters in the history of American science fiction with regard to the various functions he performs in the narrative; one of his major functions is to talk and hold forth, providing his point of view and

observations, most of them scathing, on contemporary affairs. Jubal has "lived most of a century" and has seen and experienced enough to pronounce judgments on art, sex, religion, politics, cultural taboos, and the general state of society, reflecting a great deal of cynicism. As an intellectual in a society he can manipulate –he manoeuvres the government and Douglas in gaining Mike's freedom and rights- Jubal appears as rootless, lacking social norms and values; he sometimes contradicts himself because he wants to believe in something, but he cannot comply with the rules and norms of his society, and thus he prefers his sacred individualism and his anomie. Jubal's personality is revealed first before he receives Mike under his roof; he says,

> *I had no intention of meddling with politics ... I used to think I was serving humanity ... and I pleasured in the thought. Then I discovered that humanity does not want to be served; on the contrary it resents any attempt to serve it. So now I do what pleases Jubal Harshaw (87).*

Then the narrator states,

> *He did not expect reasonable conduct from human beings; most people were candidates for protective restraint. He simply wished they would leave him alone! ... He was convinced that, left to himself, he would have long since achieved nirvana ... Why couldn't they leave a man alone? (89)*

As changeability is an aspect of his character, Jubal recants what he has said earlier and he eventually decides to fight for Mike's alleged rights. It is admitted that "he was tickled at the notion of balking the powers-that-be ... Pitting himself against the planetary government filled him with sharper zest than he had felt in a generation" (90).

After bringing him to safety and securing his wealth, Jubal's tutelage of Mike begins by teaching him to read from which Jubal discovers his superior intellectual ability in addition to his Martian psychic powers:

> *He read all night long. He was zipping through the Encyclopedia Britannica and sampling Jubal's medicine and law libraries as dessert ... Smith had taught himself to read with the speed of electric scanning and appeared to have total recall of all that he read ... Harshaw enjoyed watching this unique animal develop into a mimicry copy of a human being (94-95).*

However, reading does not teach Mike everything Mike wants to know about the nature of humans because of the wide difference between Earth and Martian cultures, and thus Jubal's role as mentor becomes more important and effective in explaining things Mike cannot grok from reading. And in helping Mike learn about human ways, Jubal is careful to preserve his innocence and keep him away from any form of indoctrination that may engulf him into conformism. He warns Jill,

> *Customs, morals – is there a difference? ... We have a personality untouched by the psychotic taboos of our tribe – and you want to turn him into a copy of every fourth-rate conformist in this frightened land! ... Mike must learn human customs. He must take off his shoes in a mosque, wear his hat in a synagogue, and cover his nakedness when taboo requires, or our shamans will burn him for deviationism. But don't brainwash him. Make sure he is cynical about it (105-106).*

Jubal's cynicism is made explicit in his view of the political bureaucracy inherent in the American system, and he himself gets entangled in its web structure when he tries to have access to the Secretary General Joseph Douglas:

> *The principle of access to the sovereign was dead in fact, regardless of the nominal form of government, and the importance of a patronage could be told by the layers of flappers cutting him off from the mob. They were known as executive assistants, private secretaries, secretaries to private secretaries, press secretaries, receptionists, appointment clerks, et cetera –but all were "flappers" as each held arbitrary veto over communication from the outside. These webs of officials resulted in unofficials who flapped the Great Man without permission from official flappers ... The unofficials grew webs, too, until they were almost as hard to reach as the Great Man (129).*

In addition of his cynical view of the political institutions, Jubal is also "a devout agnostic" (138); he rates all religions as equal and he is uncertain which one holds the truth about the notion of the Deity. He dislikes some religions more than others

and the one that makes him more depressed is the Church of the New Revelation which claims possessing spiritual knowledge through a direct line to Heaven and relies on sales-convention services in the form of slot machines, bars, the jackpot, and snake dancing. The narrator reports,

> *If God existed (concerning which Jubal maintained neutrality) and if He wanted to be worshipped (a proposition which Jubal found improbable but nevertheless possible in the light of his own ignorance), then it seemed wildly unlikely that a God potent to shape galaxies would be swayed by the whoop-de-do nonsense the Fosterites offered as "worship" (138).*

Although Jubal, at one moment, seems to think that "the Fosterites might be right" (139), he remains unshakable and resistant to the power of religious organisations which he likens to the "Third Reich" (137), and it is even claimed that "If the Fosterites held a monopoly on Truth, if Heaven were open only to Fosterites, then he, Jubal Harshaw, gentleman, preferred that eternity of painfilled damnation promised to 'sinners' who refused the New Revelation" (139). When Mike asks Jubal about religion after watching a Fosterite service on stereovision, Jubal attempts to explain the notions of God and creation, invoking a belief "he did not hold but which was believed by most human beings" (140), but he insists on the multiplicity of human religions and he makes it clear that "humans had hundreds of ways by which 'great learnings' were taught, each with its own answers and each claiming to be the truth" (140-141), and he tells Mike, "their answers are as different as two hands and seven hands. Fosterites say one thing, Buddhists say another, Moslems still another –many answers, all different ... each religion claims to be truth, claims to speak rightly" (141). Mike is troubled by Jubal's answer because on Mars there is no equivalent to the Earth concept of religion and the only supreme power is represented by the "Old Ones" who "speak always rightly", and therefore "definitions of 'lie' and 'falsehood' had been filed in his mind with no trace of grokking" (141). As to the notion of

creation, Jubal tells Mike that religions say many things, but most of them say that God made the world, and he admits, "I did not grok the fullness, but that 'God' was the word that was used" (143). Mike immediately translates the idea into the expression "Thou Art God" which signifies that God is inside everyone who groks, and the expression marks Mike's ability to link his Martian heritage based on grokking and his understanding of humanity and the universe, and it later becomes the basic precept of his new religious cult. On the other hand, Mike wants to understand the nature of mankind by asking Jubal "What is 'Man'?" (142) and what makes a man different from other animals. Jubal does not hesitate to define, "Man is the animal who laughs" (143) which Mike does not fully grasp because he does neither laugh nor understand the purpose of laughter, and thus he simply considers himself not a man. Jubal assures Mike,

> *Some day you will grok its fullness and laugh –because man is the animal that laughs at himself ... You simply haven't learned yet ... If you live among us long enough, one day you will see how funny we are- and you will laugh ... Even a Martian would laugh once he grokked us (143).*

Faithful to his cynicism, Jubal expresses his disdain and contempt of human nature and the commonly held human values which he regards as the source of all humour:

> *There was one field in which man was unsurpassed; he showed unlimited ingenuity in devising bigger and more efficient ways to kill off, enslave, harass, and in all ways make an unbearable nuisance of himself to himself. Man was his own grimmest joke on himself (142).*

Throughout the novel, Jubal Harshaw exposes his extraordinary talent as a clever lecturer and skilled orator, advocating his libertarian ideas and trying to demolish the cultural taboos and the conventional social norms of his time. Indeed, he always tends to liberate the individual from all forms of constraint and to emphasise the responsibility of the individual person to make his or her own choices and decide about his or her own destiny. Jubal's teachings are directed not only to Mike but also

to all those who are in contact with him and who are supposed to contribute to Mike's understanding of his fellow humans and their ways of life, such as Jill, Duke, and Ben. In his teachings, Jubal is so intent on his own beliefs and opinions about various aspects and practices in the Western society, attempting to form the Man from Mars and protect him from the corrupt and strange world he finds himself living in. We learn that Jubal does not oppose organisations such as government and the church, but he believes they are irrevocably corrupt and oppressive and they tend to violate individual freedom and harass people to submit to their rules and authority. For instance, Jubal does not hate Secretary General Douglas, whom he succeeds to manipulate, but he criticises the political system and its stultifying bureaucracy and its massive oppressive power. Jubal tells Ben,

> *Democracy is a poor system; the only thing that can be said for it is that it's eight times as good as any other method. Its worst fault is that its leaders reflect their constituents –a low level, but what can you expect? So look at Douglas and ponder that, in his ignorance, stupidity, and self-seeking, he resembles his fellow Americans but is a notch or two above average. Then look at the man who will replace him if his government topples (185).*

So Jubal does not blame individual leaders, but rather all humans who are held responsible for the present state in the American society, and when Ben, an even more radically anti-establishment, complains that he could have been killed by Douglas's Special Security agents after having been kidnapped, Jubal affirms that "the S.S. is just a tool. Men are always for hire who *like* dirty work. How dirty will that work become if you nudge Douglas out of his majority" (185), echoing Heinlein's distrust of the general suffrage which he has already abolished in ***Starship Troopers***. After this glimpse evoked by Jubal in the first part of the novel, Heinlein's depiction of political matters do not play a big role in the life of characters, and even when dealing with politics, Jubal tends to associate its corrupt nature with the nature

of humans who are the only race with the ability to cause harm to each other. For example, Jubal remarks that "in S.S. a man had to have larceny in his heart and sadism in his soul. Gestapo. Storm troopers for whatever politico was in power" (156). So we realise that Heinlein's attention shifts every time he examines global politics, suggesting that the most important issue in the novel is the exploration of the interpersonal relationships in society governed by social, religious, and cultural rules and customs that are subject to dissection by Jubal Harshaw.

Jubal's concern with religion and its power in society makes him come back to it in his conversation with Jill after their visit to the Fosterite church, expressing his fears that this church might become totalitarian like any other religious organisation against which he launches a harsh attack. Jubal is deeply concerned about Mike who might come under the influence of the Fosterites because he claims that the Fosterites' purpose is no more than selling happiness to people in a business-like bureaucratic practice. Jubal' philosophical voice turns into an ironic and comical tone, telling Jill,

> *The New Revelation is old stuff. Neither Foster nor Digby ever had an original thought. They pierced together time-worn tricks, gave them a new paint job, and were in business. A booming business. The thing that bothers me is that I might live to see it made compulsory for everybody ... Yes. Hitler started with less and all he peddled was hate. For repeat trade happiness is sounder merchandise ... That's why I am afraid of him, he's clever. He knows what people want. Happiness. The world has suffered a long century of guilt and fear –now Digby tells them that they have nothing to fear, this life or hereafter, and that God commands them to be happy (155-156).*

Besides, Jubal shows that the New Revelation's scripture is a combination of Christian elements; "it's just dressed in Biblical language. Part is icky-sweet, more is nonsense ... and some is just hateful" (257), and he goes on in his virulent criticism of Fosterism by saying, "I doubt if the old lecher who wrote it [scripture] was

inspired to write it –knew this; he was no scholar. But he *was* in tune with his times, he tapped the Zeitgeist. Fear and guilt and loss of faith" (260). Jubal then turns to the other religions which he qualifies as worse than Fosterism, and he gives example stories from the Bible about prophets to illustrate his point; about one of the prophets Jubal relates,

> *Elisha was so all-fired holy that touching his bones restored a dead man to life. He was a bald-headed old coat ... One day children made fun of his baldness ... So God sent bears to tear forty-two children into bloody bits. That's what it says –second chapter of Second Kings ... That's not the only shock in store for anybody who reads the Bible ... The Bible is loaded with such stuff. Crimes that turn your stomach are asserted to be divinely ordered or divinely condoned ... Along with, I must add, hard common sense and workable rules for social behaviour ... I am not running down the Bible or a dozen other religions ... It is conceivable that one of these mythologies is the word of God ... that God is in truth the sort of paranoid Who rends to bits forty-two children for sassing his Priest (259).*

However, Jubal seems favourable to certain practices in the Fosterite Church such as drinking, gambling, and dancing which make the cult, according to him, in tune with the times and attract people who seek happiness on Earth and eternal bliss in Heaven. For Jubal, these practices are done "under holy auspices" and with people's "conscience free" (259), and thus they represent the only aspect which allows individual freedom in a world that is more and more demanding in terms of individualism.

In addition, the practice that Jubal favours more in the Fosterite Church is sex which is the subject that has been lurking in the background of the story in the first chapters and then comes firmly to the forefront of the novel's concerns and becomes the basic tenet of Mike's new religion. Although he is old for sex, Jubal believes that sex is the essential defining characteristic of humans and that "a church that is agin sexual intercourse doesn't last" (257), and for this reason he finds the Fosterites right

and he praises Bishop Digby because "he doesn't expect you to chastise the flesh ... He wants people to be happy" (259). But Jubal is an old man and he is no longer interested in the performance; he tells Ben, "I am happy to say that I am still lecherous. But lechery does not command me. I prefer dignity to indulging in pastimes which, believe me, I have enjoyed in full measure and I do not need to repeat" (329). But it is Jubal who introduces Mike to sex and who provides everyone in the novel with lectures about sex and sexual taboos. Jubal checks out the mail containing pornography pictures sent to Mike by both male and female fans after he becomes a celebrity, and when Jill refuses to show Mike a picture she calls "filth" and "a disgusting picture" (232), Jubal disagrees and wants Mike to see it, arguing,

> *If Mike wants to read everything addressed to him, including junk mail, he is free to do so ... Mike has got to get acquainted with 'filth' ... Someday he'll meet the gal who wrote this, or her spiritual sisters –he'll meet her by the hundreds- shucks, with his notoriety and looks he could spend his life skipping from one bed to another. You can't stop it, I can't stop it ... furthermore, I wouldn't want to stop it (233).*

Jubal also defends Duke whose interest in pornography pictures shocks Jill and he says that "there are aspects of sex on which it is impossible to communicate between the two sexes of our race. They are sometimes grokked by intuition across the gulf that separates us" (233). Meanwhile, Mike's introduction to sex begins by revealing his kissing abilities with Jill and then with one of Jubal's secretaries, suggesting that Mike would have sexual powers as potent as his psychic powers. During his stay in Jubal's house, Mike demonstrates innocent fascination with women's bodies when he examines the picture given to him by Jill:

> *Mike was interested in the 'disgusting' picture. He grokked (theoretically) what the letter and picture symbolized, and studied the picture with the delight with which he studied each butterfly ... He understood the mechanical and biological processes being offered in these letters ... Mike knew (without grokking) that these people made ritual of this necessity, a 'growing-closer' somewhat like water ceremony. He was eager to grok it (234).*

Eventually, when Mike discovers sex, grokking and growing-closer acquire a new meaning for him; he discovers that humans have a better way –a ritual- to grok and grow together in which both body and soul are involved.

Soon after Mike leaves Jubal's house for a journey to understand humanity, he learns enough from his experiences with Patty in the carnival and with Jill as a showgirl in Las Vegas so that he comes finally to grok that sex and religion are inseparable, and therefore sex becomes central to Mike's identity and to his relation with the other people in his new religious cult. In his encounter with Patty in the carnival, Mike learns about voyeurism which he finds sexually stimulating, but his discovery has left him unresponsive to its subtle pleasures, and it is through his experience with Jill as a showgirl, displaying herself in front of men, that he comes to grok human desire and to admire women bodies and enjoy the pleasure of sex. Mike's full understanding of human sexuality and of sex as "goodness" and a source of happiness in the life of humans let him reveal to Ben when he visits his church:

> *We humans have something that my former people don't even dream of. I must tell you how precious it is ... because I have known what it is not to have it. The blessing of being male and female. Man and Woman created He them – the greatest treasure We-Who-Are-God ever invented (359).*

After grokking the existential pain that causes laughter, Mike completes his journey of self-actualised manhood and his full integration into humanity by understanding its culture and its foibles, and he now feels confident that he can help humans through his mission as a healer of souls, a religious saviour, preaching the credo: love is all one needs in this world.

After being ejected from existing human institutions, Mike proceeds to founding his own church, the Church of All Worlds, and he becomes a forceful character leading and teaching his followers, going from innocent to shrewd as he realises that

his desire to unite the human race in love and gain wide acceptance will not reach the mass effectively without commercial appeal to the populace. Though his "father" Jubal despises the Fosterites, Mike learns from Foster the art of attracting and nurturing people, a lesson he learns first from Jubal who frequently refers to the commercialism of Foster's church and then from the carnival and the Las Vegas experience where he realises the importance of capitalising on popular appeal. Thus, Mike combines in his church the elements that exert an alluring influence on people and draw in more followers; part of the appeal is sexual, part is artistic, and part is the promise of happiness. Although Mike is most of the time offstage in Part Four and Part Five and his point of view and the events that happen are filtered through the mindsets of Jubal, Ben, and Jill, he appears grown up in wisdom and he expresses eloquently his concerns about humanity and his mission and plans. He tells Jill,

> *There is no need for them to be so unhappy ... Pain and sickness and hunger and fighting –there is no need for any of it. It's as foolish as those little monkeys ... I grok them now, I can talk to them. Jill, I could set up our act and make the marks laugh every minute. I am certain (315).*

Mike still calls Jubal "father" because, as he tells him, "every time I have needed to know something, you have always been able to tell me –and fullness always showed that you spoke rightly" (423), but now it is the turn of Mike to lecture and to explain to his mentor his mission and his point of view of the American society. When Jubal rushes to Mike after the church burns down, he becomes a pupil listening attentively to Mike's speech:

> *Father, I saw the horrible shape this planet is in and I grokked that I could change it. What I had to teach couldn't be taught in schools; I was forced to smuggle it in as a religion ... In part it worked as I knew it would ... Our brothers get along together –you've seen, you've shared- live in peace and happiness with no bitterness, no jealousy. That alone was a triumph. Male-femaleness is the greatest gift we have –romantic physical love may be unique to this planet (419).*

Before his rush to Mike, Jubal defends the new religion and advises Ben to join the church and he even expresses his fatherly concern about Mike, but he resists joining himself and he refuses to visit Mike until the temple is burnt and destroyed. Indeed, Jubal's fear at giving up his individualism and his uncompromised independence is still strong and he resists all the way because he sees organised religion as the enemy of freedom, individualism, and even sanity. However, when Mike gives him something he believes in, which his senses cannot deny, he capitulates and cannot help but to perceive it as a cult that holds truth. In fact, Jubal does not reject commitment as a matter of principle, but he has reservations concerning the question of the responsibility of the leader and he considers that only an angel "could live up to the responsibility implied by 'Thou Art God'" (421). Jubal asks Mike, "Aren't you afraid of playing God?", and Mike insists, "I *am* God. Thou are God ... and any jerk I remove is God, too," arguing, "No matter what I said they insisted on thinking of God as something outside themselves ... The notion that the effort has to be their own and that the trouble they are in is all their own doing ... is one that they can't or won't entertain" (423). Finally, Jubal recognises Mike's church's function as producing happiness and he finds himself committed to Mike's philosophy and advising him once more before the martyrdom scene:

> *You've proved that your system works for a small group –and I am glad to confirm it; I've never seen such happy, healthy, cheerful people. That ought to be enough for the short time you've put it. Come back when you have a thousand times this number, all working and happy and unjealous ... all you have to do is show them –and in a matter of some generations the stupid ones will die out and those with your discipline will inherit the Earth (423-424).*

Moreover, upon joining Mike's religion, Jubal gives up his sexual abstinence and, though a firm believer in sexual privacy, he shares his experience with Dawn Ardent

with everyone in the nest. The narrator tells us of his ecstasy which he does not want to reveal to Mike,

> *Jubal refrained from saying that the only times he had ever felt that he could read minds was precisely in that situation ... and then not thoughts, but emotions. He simply regretted without bitterness that he was not half a century younger ... Also that he would not trade the preceding night for all the years that might be left him. In essence, Mike was right (420).*

So Jubal becomes the focal character again in the last chapters and he plays the role of spiritual father for Mike's followers and apostle to Mike; Ben calls him "the patron saint" (392), and he reveals to him that all Mike's brothers respect him and "any of them would be delighted to have you call them over" (392).

By the end of the novel, Jubal makes explicit a connection that has been implicit since the beginning of the novel; Mike is presented as a Jesus figure, suggested as early as the title of the first part, His Maculate Origin, which refers to the immaculate conception of Jesus Christ although Mike's conception is flawed and he is the product of human beings and not of any deity. Therefore, Mike's unconventional conception and his new way of telling his version of the truth defying all Earth's institutions and its conventional moral code and social rules reflect in a sense the Christian mythology and suggest that Mike would meet a Christ-like end. Jubal draws the parallel between Mike and Jesus when Sam, a water-brother in Mike's church, relates that Mike has started less than two years ago, uncertain and with the help of only three priestesses, and now they have a solid nest. Jubal is eager to say, "Jesus made quite a splash with only twelve disciples" (405), and in his worry over Mike and in anticipation of his destiny, Jubal tells Ben before the burning down of the church that

> *Mike is courting martyrdom ... This pattern has been offered to a naughty world many times – and the world has always crushed it ... take the early*

> *Christians ... Mike has borrowed a lot from them ... Over and again it's been the same sad story: a plan for perfect sharing and perfect love, glorious hopes and high ideals – then persecution and failure (364-365).*

Mike himself projects his own destiny after the destruction of his church and he tells Jubal, "Fire can't destroy the experiences ... and from a standpoint of practical politics, being chased out in so spectacular a fashion will help, in the long run. Churches thrive on martyrdom and persecution" (415). On this account, Mike's Happy Destiny, the title of the last part, does not suggest failure but rather victory since Mike, after letting himself discorporate, ascends to Heaven as Archangel, continuing his heavenly influence on Earth. Indeed, the ending of the novel suggests that Mike's followers have accepted him as their holy leader and that his teachings will remain long after his death, carried on by his apostle (Jubal) who begins to learn Martian and to write his gospel. More significant, Mike's messianic mission is further heightened by Heinlein's choice of the names of his major characters. It is no accident that Smith's names are Valentine for love and sometimes for its sexual connotation in Western culture, Michael for Archangel Michael, and Smith which is interpreted as either "spelling out the idea of universal amity" (Stover 1987: 56) or referring to the American religious leader Joseph Smith who founded in 1830 the Church of Jesus Christ of Latter-Day Saints and who was murdered by an anti-Mormon mob. Besides, with regard to Jubal's interest in art, Harshaw's first name "Jubal" is the name of the Biblical character in the Book of Genesis known as the forefather of all musicians who play the lyre and pipe (harp and flute).

Although Mike seems to be the novel's central character –he is the stranger in a strange land of the title- the internal structure of the book actually centres on the complex relationship between Mike and Jubal Harshaw who are both versions of the Heinleinian strong and competent character. Both are manipulators who control and

direct others who seem to have no will of their own, and they both talk and act as mouthpieces for Heinlein's ideas and points of view, especially Jubal who is presented as a master of rhetoric and wisdom with his interminable speeches and monologues that constitute a massive portion of the narrative. Many characters engage in arguments with him, but none ever shakes or oscillates Jubal's opinions and beliefs. However, if Jubal is chief manipulator and Mike's teacher and mentor at the beginning, the roles are soon reversed and Jubal becomes the victim of Mike's manipulations and the teacher becomes pupil, but his new role after joining Mike's church becomes even more important as he acts as a spiritual father for all the church's followers. Therefore, with regard to their function in the story and their interchangeability, Mike and Jubal are actually different versions of the same person whose real function is to represent Heinlein and to transmit his point of view. Regardless of Mike's mystical powers and alien thoughts and behaviour which are incorporated into his church and for which many critics have attacked Heinlein as being unrealistic, Mike is not so much a character; he is in fact Heinlein's working of a personality structure and not an individual person in the usual and conventional sense. Heinlein is not so much interested in individual characters as it may appear from the title or from our first reading of the story; instead, his major character Mike, like Jubal, is Heinlein himself viewing American civilisation and its failing aspects and bringing into question each of its axioms and then supplying the alternative mode in the form of a religion. Alexei Panshin points out, "Instead of describing them or giving them traits, Heinlein has generally differentiated his characters in terms of action and dialogue, what they do and what they say" (Panshin 1968: 186). Actually, Heinlein's characters do not stand for individual personalities; Mike who is transformed into a messiah figure is the story and not the individual character, and

even his Martian-inherited powers can be viewed as part of the science fiction or more appropriately fantasy elements that have become most widely approved and used in post-war science fiction.

If Mike is the story and if he represents Heinlein in viewing American society from the outside with his cosmic detachment making it look strange and stupid, worthy of indictment and fit for radical change, Jubal is actually the one who makes such critique and who instructs Mike in his learned estrangement and from whom Mike indirectly derives his philosophy and ideals. In all his wisdom, competence, and all-around experience acquired through "years of practice" (105), Jubal does not stand in for his own individual personality; he rather appears as the spokesman for the worst in American society and culture as Heinlein himself judges it, and thus he is the vehicle of Heinlein's satire. And although there is an omniscient narrator, only vaguely realised by exposing the reader to some of the follies of mankind and the culture of Martians, Jubal is implicitly the real teller of the story with all the load of ideas and opinions it holds. David Pringle and John Clute affirm that Jubal Harshaw is a "know-all voicebox for Heinlein himself" (Pringle and Clute 1999: 556), while Thomas Wagner remarks that Jubal "serves as Henlein's Mary Sue" (Wagner 2007: www.sfreviews.net), making reference to a fictional character that is too much idealised and that stands in for the writer.

On the other hand, the parallel between Jubal and Heinlein is made clear through Jubal's profession as a writer and his interest in art to which he gives a special value in the novel. After explaining to Ben how to appreciate realistic art by showing him his gallery of sculpture, Jubal launches into an attack on the abstraction of modern art which he qualifies as "pseudo-intellectual masturbation" because it does not tell

"stories that laid bare the human heart" (325), while real "creative art is intercourse, in which the artist renders emotional his audience" (325). And in his criticism of modern artists, Jubal asserts, "Most of these jokers don't *want* to use language you and I can learn; they would rather sneer because we 'fail' to see what they are driving at. If anything. Obscurity is the refuge of incompetence" (326), and he cynically concludes, "the world has gone nutty ant art always paints the spirits of its times" (325). Undoubtedly, Jubal's view of art embodies, on one hand, a sexual metaphor given the nature of Mike's religion, and tells, on the other hand, about Heinlein's career as a writer who displays enough courage in being more direct about his views and opinions in his fiction, especially in *Stranger*. From his taste in visual art, Jubal shifts to his own profession as a writer of fiction and gives his own opinion which evokes closeness to Heinlein's view of the art of writing:

> *'Artist' is a word I avoid for the same reason I hate to be called 'Doctor'. But I am an artist. Most of my stuff is worth reading only once ... But I am an honest artist. What I write is intended to reach the customer – and affect him, if possible with pity and terror ... or at least divert the tedium of his hours. I never hide from him in a private language, nor am I seeking praise from other writers for 'technique' or other balderdash. I want praise from the customer, given in cash because I've reached him – or I don't want anything. Support for the arts ... A government-supported artist is an incompetent whore! (326).*

As a writer, Jubal eventually decides to write his version of the story of Mike after Mike's death; he calls Dorcas and begins to dictate, "Rough draft. Working title: 'A Martian Named Smith'" (437), which is in fact the title Heinlein had initially put for his story.

As far as the secondary characters are concerned, they are treated as nonentities, having no great influence and fulfilling plot functions; indeed, they lack psychological depth and individual personality traits and the free will to act although most of them are intellectually competent and professionally skilled in various fields.

Actually, they spend much of their time discussing religion and social customs and absorbing Jubal's philosophical lectures which dominate the whole narrative. Ben Caxton, an anti-establishment news columnist, seems to have life and an independent identity at the beginning of the novel when he has set the action of the story in motion with his attempt to save Mike from the gears of political conspiracy and also with his intention to marry Jill, but after his kidnapping and with the appearance of Jubal on the scene he fades from the forefront of the story until near the end. When Ben returns to the centre of the action after his visit to Mike, he allows, with his traditional mindset, to see Mike's church as an unnerving and strange cult in the same way as the Fosterite church is portrayed. Sceptical like Jubal, Ben expresses his uneasiness about Mike's role as a prophet and about the church's members who have been brainwashed by Mike; he says that Mike is "either an expert illusionist, or an amazing hypnotist" (342), and he qualifies his practices as "almost a voodoo rite" (340). Moreover, Ben is mostly shocked by the regular nudity and the free love ethos embraced by the church followers, stating, "I simply have no stomach for group orgies ... I am shocked only by that which offends me ethically" (361). However, when Jubal lectures him about outmoded morals and explains that his problem is jealousy rather than love, Ben curiously lets go all his traditional concepts and joins Mike's religion like all the other characters in the novel.

Like Ben, Jill is the capable nurse who helps spirit Mike away from the hospital, and once she gets to Jubal, she virtually becomes a fourth secretary and takes on the responsibility of teaching Mike human social customs, and then she accepts being his companion in his journey to understand the nature of humankind. Jill explains and interprets everything Mike encounters in his journey, and at the same time she learns from Mike his Martian culture and language and she does at no moment question his

ambitions and ideals which she willingly shares. At the beginning of the novel, Jill is mainly distinguished by her affectionate love for Ben and her outrageous repulsion to Duke's interest in pornography pictures which she considers "naughty" and "disgusting," but after she leaves Jubal's house with Mike, she strangely becomes a showgirl, flipping completely from prude to lewd, displaying herself to the customers, and enjoying being looked at by men. She once tells Mike, who telepathically shares her ecstasy, "I'd do our act stark naked if the clowns wouldn't close the show" (280). In Mike's church, Jill becomes a high priestess who teaches Martian and helps the members learn the telekinetic powers she has herself learned from Mike, and mostly important and with no possessiveness, she shares Mike with Patty and then with everyone else in the nest. She even helps Ben conquer his jealousy by letting him alone with Dawn Ardent, and she also arranges to get Jubal in the nest by making Dawn share his bed and making the entire nest share their experience.

Among the other minor characters in the story, Dr. Mahmoud, the Champion's linguist, an Oxonian Arab and a religiously devout Muslim, is treated with respect by both the narrator and the other characters. By presenting Dr. Mahmoud with a moral worldview and a religious belief different from those of Jubal and the other characters, Heinlein stresses the universality of Mike's quest to connect with all humanity and not only the Western people. Since he knows the Martian language, Mahmoud becomes close to Mike from the beginning of the story, and he so often interprets and translates to the other characters some Martian concepts that Mike cannot express in English, such as grokking, the Old Ones, and discorporation. Mahmoud is one of the characters who frequently engages in arguments with Jubal about religions and about Mike's cultural heritage and his adaptation to human ways

and customs. Mahmoud's devotion to his own religion is highlighted by his refusal to drink and to eat what is forbidden by Islam, and even when Jubal proposes his secretaries for Mahmoud to get married, he simply replies, "Then, I'll have to convert one" (262). Besides, Mahmoud reveals his concern about Mike and he fears the influence of the Fosterites on him, and thus he suggests,

> *As a Muslim, I find in him a willingness to submit to the will of God ... and this makes me happy for his sake although there are difficulties and as yet he does not grok what the English word "God" means ... nor the Arabic word "Allah." But as a man – and always a slave of God – I love this lad, our foster son and water brother, and would not have him under bad influence (261).*

Suddenly Mahmoud drops out of sight, and it is later revealed that he has married Myriam, one of Jubal's secretaries (without saying whether she is converted or not), and they both move to Beirut. Then Mahmoud reappears near the end of the novel with Mike's followers in the hotel, and we learn that he and his wife are engaged in writing a Martian dictionary since the mastery of the Martian language is considered the key to Mike's religious cult as well as to his psychic powers. Jubal is surprised to find Mahmoud in the hotel as one of Mike's followers and one who defends his religion:

> *"You are still one of the faithful? I thought perhaps you had joined Mike's church all the way."*
>
> *Mahmoud put away the beads. "I have done both."*
>
> *"Huh? Stinky, they're incompatible."*
>
> *"Only on the surface. You could say that Maryam took my religion and I took hers. But, Jubal my beloved brother, I am still God's slave, submissive to his will ... and nevertheless can say: 'Thou art God; I am God, all that groks is God.' The Prophet never asserted that he was the last of all prophets nor did he claim to have said all there was to say. Submission to God's will is not to be a robot, incapable of choice and thus of sin. Submission can include – utter responsibility for the fashion in which I, and each of us, shape the universe. It is ours to turn into a heavenly garden ... or to rend and destroy ... Islam remains ... It is His – mine ... yours ... Mike's (396-397).*

Like Jubal, Mahmoud is another character who transmits Heinlein's ideas and advocates his religious cult by rejecting all other religions which he considers authoritarian and about which he tells stories that are sometimes erroneous.

The other minor characters in the novel –the Champion's crewmen, Mike's church members, Jubal's secretaries and male assistants, the Fosterite clergy- are stock characters designed to serve the plot; they are not described and they have no concerns of their own which may create their independent identity. In fact, they appear on various occasions discussing the same subjects which constitute the foundation of Mike's religion, and in joining Mike they are portrayed as searchers for freedom and happiness they have lost in their world. And in his treatment of female characters, Heinlein is faithful to his tradition of portraying women as brilliant, intelligent, and competent as men, and yet their individual identities are undermined, making the difference between all women characters in ***Stranger*** seem unimportant to the extent that they are barely undistinguishable from one another. This omission of individual personality of women characters is stressed by not revealing which woman among Jubal's secretaries initiates Mike to sex. Although many critics have accused Heinlein of sexism and of exploiting women as sexual objects, he nonetheless offers an example of paternalistic relationship between Jubal and his secretaries who enjoy their stay and work in his house. In his old age and his celibacy, Jubal regards his secretaries as his own daughters; he treats them with respect and he never oppresses or abuses them, allowing them a great deal of freedom and power in their employer/employees relationship. However, in regard to their role in the story, Jubal's secretaries align with all the other characters, male and female, who are presented as followers of Mike in their search for freedom from the various constraints in their society.

According to many of Heinlein's critics and science fiction critics in general, this way of treatment of characters, denying them individual identity and any sort of depth, is the weak element in the writing of science fiction, which is generally described as a purposeless neglect of character development and of giving them life of their own. Carl Malmgren states, "I would admit that some science fiction (like other forms of fiction) resort to stock characters and stereotypes in elaborating its roster of actants," and he argues that science fiction, "given its grounding in the epistemology of science and its acceptance of an impersonal, value-neutral universe (both functions of its discourse), is generically inimical to the exploration of character" (Malmgren 1991: 56). Gwyneth Jones goes further by declaring:

> *Whether or not they have the skill, science fiction writers do not have the space for deep and studied character development, because they are bound to foreground the imagined world, the action adventure and gadgets… science fiction relies, like the other popular fiction genres, on a set of stock figures, recognizable and emblematic as the characters of pantomime or the Commedia dell' Arte (Jones 2003:171).*

Heinlein's critics are even harsh in condemning him for his treatment of characters in ***Stranger***; for example, Alexei Panshin points out that Heinlein "lets all character development go hang" (Panshin 1968: 146), while the literary critic for the New York Times Orville Prescott wrote, "Heinlein writes of earthly and American matters from the supremely 'unworldly' point of view of a Martian ... Mr. Heinlein has little gift for characterization" (Prescott 1961: 19). Similarly, Brian Aldiss and David Wingrove claim that Heinlein's major characters in ***Stranger*** "end, as they began, backwoods philosophers ... They are the know-alls who love to lecture others" (Aldiss 2001: 449), and David Pringle and John Clute are more explicit in blaming Heinlein for making his major characters "utter unstoppable monologues in their author's voice, and dialogue and action become traps in which any opposing versions

of reality were hamstrung by the author's aggrieved partiality" (Pringle and Clute 1999: 556).

It is all true that Heinlein's voice in *Stranger* as in *Starship Troopers* is the only voice that animates the narrative, leaving little or rather no space for any individual person to build up an identity and to have a personal opinion. The suppression of the self and the crushing of identity in Heinlein's novel is undeniably a reflection of the reality of human life in the modern world –more particularly in the post-war era- in which humans are overwhelmed by collective pressures in the form of political, religious, and social institutions which Heinlein attacks and condemns as being a threat to individualism and individual freedom. Throughout the novel, Jubal –or Heinlein- does not reject institutions as a matter of principle for they are a social necessity, but he launches an attack against the established order which he sees as totalitarian and violating human identity. Heinlein brings into question every aspect of American culture and holds in contempt all institutions that exert any form of coercion such as government, organised religion, and the media, under whose pressures the self dissolves into the collective and individual men and women become anonymous crowds manipulated by their forces. For example, when the government searches for Mike after he leaves the hospital, Jubal fears that the government might be spying on his home, which he considers "as repulsive as having his mail opened" (95), and the narrator reflects,

> *Government! Three-fourths parasitic and the rest stupid fumbling –oh, Harshaw conceded that man, a social animal, could not avoid government, anymore than an individual could escape bondage to his bowels. But simply because an evil was inescapable was no reason to term it "good" (95).*

Even the media becomes a target of Heinlein's attack because of its coercive effect, not only on individual freedom but also on sanity; Jubal tells one of his secretaries,

“Remind me to write an article on the compulsive reading of news. The theme will be that most neuroses can be traced to the unhealthy habit of wallowing in the troubles of five billion strangers” (189). In a similar vein, Jubal stresses the respect of individual freedom and he tells Duke, “A desire not to butt into other people’s business is eighty percent of all human wisdom” (177). And as a lawyer and an advocate of individual freedom, it is revealed that “Jubal longed for the days when a lawyer could cite the Bill of Rights and not have some over-riding Federation trickery defeat him” (156). Moreover, Jubal resents forcefully the technological progress that has produced all the devices that have transformed human beings into slaves of the machines. Although his house is equipped with electronic devices, Jubal avoids using them in person and he charges his assistant Duke to take care of them. It happens once that an electric equipment is damaged and a circuit breaker must be reset to make it function again, so Jubal is upset and he “did not care who was to blame –it all confirmed his conviction that technology had been growing decadent” (176), and when he is called by Dorcas to answer the phone, he replies, “Machinery again, I’ll answer it with an ax! I’ve been intending to get rid of that iron maiden” (179). For these reasons, Jubal revels in his individualistic style of life, not being subject to any form of commitment, and he is even careful to teach Mike to be himself and not conform to the rules and restrictions of human society, “he simply wished they would leave him alone” (89). In fact, Jubal finds that living in contemporary society is very demanding in terms of individual freedom and personal identity, and thus “he purposed to live each golden moment as eternity –without fear ... with sybaritic gusts ... Harshaw wished to live in lazy luxury, doing what amused Harshaw” (130).

When Jubal finally joins Mike's church and embraces his ideals, he does not actually give up his individualism and freedom; indeed, he believes that the "truth" Mike's church comes up with, in contrast to all other religions, is simply freedom since it liberates its followers from worldly concerns and allows them to achieve happiness through the exaltation of both the body and soul. Jubal seems finding what he misses in his society, and in defence of the new religion, he argues,

> *The faith I was reared in didn't require anybody to know anything. Just confess and be saved, and there you were, safe in the arms of Jesus. A man might be too stupid to count sheep ... yet conclusively presumed to be one of God's elect, guaranteed an eternity of bliss, because he had been 'converted' ... This church doesn't accept 'conversion' (403).*

And in response to his argument, Sam, a Jewish member of the church, explains that Mike's cult is based on "a willingness to learn," and that the discipline taught by Mike and his priests and priestesses "results in this horn-of-plenty of benefits ... understanding who you are, why you're here, how you tick –and behaving accordingly. Happiness is functioning the way a being is organized to function" (403). Therefore, Heinlein's religion in *Stranger* is intended to counteract the oppressive powers in society that annihilate the self and extinguish individual freedom, and Mike's libertarian ideals are seen as the only possible way to restore freedom and identity to humans. In this respect, the presentation of the characters in the novel provides a clear picture of the situation of man in contemporary society; they lack individual personality traits and personal concerns and they are hardly distinguishable from one another, living under the pressures of the overwhelming powers that treat them as crowds rather than individual humans. Even Jubal who tries to maintain his individual freedom and identity cannot enjoy his life in isolation outside society, and thus his and the other characters' rush toward Mike's religion represents the beginning of liberation from those powers and an affirmation of

individual personality by letting the church members express freely their feelings and desires and act accordingly. Then it follows that Mike, the founder of the church, and Jubal, his mentor and Heinlein's voice in the story and then Mike's follower, are the teachers of a generation in the post-war era that suffered the oppressive and repressive powers in the American society and that found in Heinlein's religion the only route to salvation. Thus it becomes obvious that Mike's libertarian ideas and the founding of his religion command much of Heinlein's attention in the novel, and they also represent the elements whose subversive effects on society have provoked a flood of harsh criticism and indignation in a way no other science fiction book of the 1960's can match.

4.3.3. *Stranger in a Strange Land*: The Subversive Cult Book of the 1960's

Manifestly, Mike's Church of All Worlds is what the whole book has been leading up to, with the mingled Earth and Mars sensibilities and concepts going into the making of the Man from Mars. In addition to being a severe indictment of Western civilisation and a questioning of "every major axiom of Western culture," according to the jacket copy of the 1965 British edition, Heinlein's book offers a religion which involves radical social and sexual divergencies from the accepted norms in the form of Mike's cultic practices that combine terrestrial and Martian principles. Part of this religious cult is that humans are supposed to raise themselves to Mike's superior status by learning Martian concepts which consist of the Martian language, the concept of grokking, water-sharing, and most important the psychic powers by which the individual can control his/her own body as well as the surrounding physical world. While most of these Martian concepts, which are depicted as simply the product of an alien culture, have been widely judged by critics

as unrealistic and illogical and even impossible by human and scientific standards, the Earth new morality and principles incorporated in the church have been condemned as subversive, preaching revolution and threatening the stability of society and its moral code. Curiously, it is this latter aspect of the book that attracted the readers and exerted the greatest and unprecedented influence on the young generation of the 1960's that was tempted to read Heinlein's book as a manifesto for a better way of life, culminating in the counterculture movement with its dramatic switch in attitudes towards morality and more particularly towards sexuality that swept America and the rest of the Western world in the 1960's. In fact, the novel is filled with discussions of morals, sex, and free love in a way unparalleled in the annals of science fiction because the genre was for so long the most asexual of literary fields, and a more casual attitude toward sex was considered a taboo in the science fiction pulps of the 1940's and 1950's. Indeed, Heinlein was one of the earliest authors to introduce considerations of sex per se in science fiction, leading his critics of the time to pronounce the novel was a failure because science fiction and sex do not mix. However, Heinlein did not accept the genre to remain locked up in its immature pulp tradition, and he replied to his contemptuous critics at the time of the book's publication, "I had to wait for the mores of America to change. I saw them changing, and my timing was right" (Quoted by Stover 1987: 54).

Given the nature of his religion, Heinlein's discussion of sex and morals constitutes the background of much of the characters' talk, professing love for each other with no exclusive commitment or selfishness. The real discussion of sex begins when Mike discovers the "subtle pleasures of voyeurism" (286) and of human desire with Jill as a showgirl who teaches him to admire pornography pictures by acting herself various poses, and she tells Mike, "So now I grok why Duke likes pictures of

women, the sexier the better ... I ought to get a real naughty picture taken of me and send it to Duke to tell him I'm sorry I failed to grok what I thought was a weakness in him" (303). Then, it is with the tattooed lady Patty that Mike "groks the fullness" of physical love; he admires her naked body and "what he saw when he looked at Pat without tattoos pleased him" (286). After making love, Mike realises that

> *Physical human love –very human and very physical- was not simply a quickening of eggs [making babies], nor was it ritual through which one grew closer; the act itself was a growing-closer ... he grokked that his new people held spiritual depths unique. Happily he tried to sound them, with no childhood inhibitions to cause him guilt nor reluctance of any sort (285).*

Moreover, Patty, who has been a strongly committed Fosterite, offers Mike and Jill a lecture about love and happiness and the worth of standing apart from the materialistic concerns of life which Mike later integrates into his own church. Patty is so confident to say,

> *God wants us to be happy. He filled the world with things to make us happy. Would God let grape juice turn to wine if He didn't want us to drink and be joyful? He could let it stay grape juice ... or turn it into vinegar that nobody could get a giggle out of ... Of course He don't mean we should get roaring drunk and beat your wife and neglect your kids ... He gave us good things to use, not abuse ... If God didn't want women to be looked at, He would have made them ugly ... God wants us to be happy and He told us how: 'Love one another1' ... If God hated flesh, why did He make so much of it? ... When God told us to love, He meant it ... You can't sell love and you can't buy happiness ... If you give with an open heart and receive what God has an unlimited supply of, the Devil can't touch you. Money? Would you do that water-sharing thing with somebody, say for a million dollars? Make it ten million (288-289).*

Another element in the making of Mike's cult is the concept of nudity which Mike inherits from his Martian culture; in fact, Mike finds "buying clothes without interest. He could see no sense in clothes other than for protection against weather, a weakness he did not share" (277). However, after learning about sex and love, Mike's perception of nudity becomes closely related to sexuality and the practice becomes commonplace among Mike's followers in the Nest. When Ben visits the

church for the first time, Jill explains to him that Mike "groks they're [clothes] a wrongness that keeps people apart –gets in the way of letting love cause them to grow closer," and she refers to the unnecessity of clothes as a principle in the church when she attempts to clarify the nature of Mike's religion by stressing that what they offer to people "is not faith but truth –truth they can check ... truth so practical that it can make war and hunger and violence and hate as unnecessary as clothes in the Nest" (347). While Ben is initially shocked at Mike running his church "along nudist lines" (345) which he considers impolite, Jubal approves Mike's custom and argues, "You were suffering from a morbid fear of appearing ridiculous ... You knew what was polite, but were afraid of looking silly ... I grok Mike has reasons for this custom –Mike always has reasons" (345).

As far as the subject of sex is concerned, Heinlein defies all the conventional social norms and the moral code that commands the sexual behaviour of humans, and he calls for a revolution and unprecedented upheaval in human relationships by sweeping away the principles that are intrinsically part of human experience and nature. When Ben reports that "what they are doing is wrong!" (365), Jubal, Heinlein's viewpoint character, takes Mike's side and defends his practices by arguing,

> *The ethics of sex is a thorny problem. Each of us is forced to grope for a solution he can live with –in the face of a preposterous, unworkable, and evil code of so-called 'morals.' Most of us know the code is wrong, almost everybody breaks it. But we pay Danegeld by feeling guilty and giving lip service. Willy-nilly, the code rides us, dead and stinking, an albatross around the neck ... I see the beauty of Mike's attempt to devise an ideal ethic and applaud his recognition that such must start by junking the present sexual code and starting fresh. Most philosophers haven't the courage for this; they swallow the basics of the present code –monogamy, family pattern, continence, body taboos, conventional restrictions on intercourse, and so forth –then fiddle with details ... They debate how we can be made to obey this code –ignoring the evidence that most tragedies they see around them*

> *are rooted in the code itself rather than in failure to abide by it. Now comes the Man from Mars, looks at this sacrosanct code with a fresh viewpoint – and rejects it ... Sex should be a means of happiness, Ben, the worst thing about sex is that we use it to hurt each other. It ought never to hurt; it should bring happiness, or at least pleasure (365-366).*

Jubal's theoretical lecture is followed by insinuating illustrations to make his argument convincing, not only to Ben but to the readers and to society at large, and thus he states, "The code says, 'Thou shalt not covet they neighbor's wife.' The result? Reluctant chastity, adultery, jealousy, bitterness, blows and sometimes murder, broken homes and twisted children –and furtive little passes degrading to woman and man" (366), and then Jubal claims that Mike has come to spare society from all these problems because Mike says, "There is no need to covet my wife ... love her! There is no limit to her love, we have everything to gain –and nothing to lose but fear and guilt and hatred and jealousy" (366).

By the end of the novel, Mike eventually comes up with his fully articulated philosophy, echoing Jubal's libertarian ideas in terms of sexual mores by embracing radical individualism and free expression of physical and emotional love. Shortly before his death, Mike becomes the teacher who lectures his mentor, and in his last speech he gives his view of sex as it is perceived in society and as he adopts it in his own religion:

> *Romantic physical love may be unique to this planet ... the merging of bodies with merging of souls in shared ecstasy, giving, receiving, delighting in each other ... That's what sexual union should be. But that's what I slowly grokked it rarely was. Instead it was indifference and acts mechanically performed and rape and seduction as a game no better than roulette but less honest and prostitution and celibacy ... and fear and guilt and hatred and violence and children brought up to think that sex was 'bad' and 'shameful' and 'animal' and something to be hidden and always distrusted. This lovely perfect thing, male-femaleness, turned upside down and inside out and made horrible (419-420).*

Furthermore, sexual freedom in the novel is made closely related to the elimination of sexual jealousy, which is depicted as insane and causing much suffering to humans. Jubal is the first one who brings up the subject when he identifies Ben's behaviour of fleeing Mike's Nest as an act of jealousy which "gets [him] nowhere" (363). He explains to Ben that

> *Jealousy is a disease, love is a healthy condition. The immature mind often mistakes one for the other, or assumes that the greater the love, the greater the jealousy –in fact, they're almost incompatible; one emotion hardly leaves room for the other. Both at once can produce unbearable turmoil- and I grok that was your trouble, Ben. When your jealousy reared its head, you couldn't look it in the eye –so you fled ... What is 'love,' Ben? ... 'Love' is that condition in which the happiness of another person is essential to your own (363).*

Jubal concludes that all what those people in the Nest are doing is moral, and he cites, "bacchanalia, unashamed swapping, communal living and anarchistic code, everything" (364). As a source of ideas, Jubal's lectures are generally called in by Mike, and what Jubal says about jealousy is again recalled in Mike's speech in which he rejects jealousy and professes instead a style of life with no possessiveness and no exclusive commitment. He tells Jubal in the end of the novel,

> *Everyone of those wrong things is a corollary of 'jealousy.' I couldn't believe it ... It seems insanity to me. When I first learned what this ecstasy was, my first thought was that I wanted to share it, share it at once with all my water brothers ... The notion of trying to keep this never-failing fountain to myself would have horrified me ...And in perfect corollary I had no slightest wish to attempt this miracle with anyone I did not already cherish and trust ... And this runs all through the Nest. (420).*

Jill, on the other hand, praises Mike's "fine system," as Jubal qualifies the religion, and states its benefits for women since sex is freed from its traditional purpose of reproduction which she regards as not the primary goal. Jill states that considering babies the primary purpose of sex is "silly behaviour on the part of a person," and she argues,

> *Only three or four or a dozen times in a woman's life is a baby quickened in her out of thousands of times she can share herself –and that is the primary use for what we can do so often but would need to do so seldom if it were only for reproduction. It is sharing and growing closer, forever and always ... What a happy thing it is to be human ... and a woman! (409-410).*

And to give evidence of the validity and working of his devised system, Heinlein offers scenes of shared happiness and delight experienced by all the Nest members, and he even lets the nestlings themselves testify as to the spectacular changes brought into their lives after joining the new religion. Jubal notices the unusual happiness among Mike's followers even after the burn down of their church and he "found in them a most unusual feeling, an unhurried relaxation ... No one seemed excited, never in a hurry ... Why were they happy? Their temple and all they had built had been destroyed, yet they seemed like kids on a night before Christmas" (391). Likewise, Sam, one of the church members of Jewish origin, affirms the happiness he lives in with his wife after discovering the "truth" Mike preaches, and he relates his experience to everyone in the Nest:

> *That's my wife. Not much over a year ago we lived together like bad-tempered dogs. She was jealous ... and I was inattentive. Bored. Hell, we were both bored and only our kids kept us together –that and her possessiveness; I knew she would never let me go without a scandal ... And then we joined up ... and I fell in love with my wife ... The point is that we are now partners, more so than we ever were outside –and we got that way through the training, culminating in sharing and growing closer with others who had the same training. We all wind up in partnerships inside the group ... No loss and all gain (401-402).*

In a novel in which the most stable family consists of a celibate old man and his three secretaries and in which no traditional couple is presented, the introduction of Sam and Ruth –his wife- as the only married couple within the Nest, before the arrival of Mahmoud and Myriam, implies that for a marriage to be successful and to survive, it should not be sexually exclusive. And even Ben's longing for Jill represents the classical romantic notion of monogamous love which Heinlein rejects, equating it

with selfishness and possessiveness. Therefore, Jill, who represents the perfect incarnation of sharing and growing closer in the Nest, rejects Mike's offer of marriage before the founding of the church, and she argues, "We wouldn't be any closer, we already share water ... I wouldn't have Dorcas, Anne and Myriam –and Patty- think that I was trying to crowd them out ... I don't need it. Because you married me in a hospital room ages and ages ago" (301).

In reality, it is this range of ideas and opinions on such matters as morals and sex that has drawn critics to Heinlein's novel more than anything of form and style, artistry and craftsmanship. In fact, most of Heinlein's critics agree that *Stranger* is a subversive book and its teachings and ideas are hard to accept by most social and moral standards. The most strident denunciation comes from Luc Sante who calls the book "the Bible of psychedelic zealotry" (Quoted by Dolman 1997: 196), and he singles it out as Charles Manson's mentor. Thomas Wagner condemns it as "an earth-shaking revelation that popular religious movements are little more than hucksterism exploiting the emotionally and intellectually bereft," and he severely concludes that "the story's core message that humanity's problems can be solved by practising cultish groupthink and promiscuous sex was stupid then and is stupider now" (Wagner 2007: www.sfreviews.net). Alexei Panshin, on the other hand, states that,

> *What Heinlein has given is an unstable way of living. He ignores completely the pain, jealousy and uncertainty that are the ordinary stuff of human experience. He describes a romantic ideal, unworkable in reality ... Within the story, anyone incapable of accepting the religion along with its sexual concomitants is not a real person (Panshin 1968: 113).*

However, it is worth mentioning that Heinlein's religion, no matter how insurgent it is, is not the only thing there to concentrate on because it is equally important to consider the inhibiting forces at work in society that have led to such revolutionary

reaction. In fact, what Heinlein does with success in his book and what his readers sense more deeply is a close watch over the country's realities and a serious questioning of its ideals as if anticipating the impending social changes that would sweep America in the 1960's and to which actually Heinlein's novel contributed massively. What can obviously be said is that ***Stranger*** evidently fits the iconoclastic mood of the times by attacking human follies under several guises, especially in the persons of the established institutions such as government and organised religion, and the religion of love it advocates is an alternative model which is intended to revolutionise human affairs and bring about a change for a better life for individuals. Of the few critics who have advocated Heinlein's novel, Leon Stover seems touching on the underlying motive in the book by stating that "the impossible powers and freedoms he [Heinlein] preaches only call attention to wrongs that are to be righted by practical reforms, arising from that enhanced sense of American self-awareness that it is the novel's true purpose to induce," and he concludes, "***Stranger*** is a strong-minded work of culture criticism, no doubt about it" (Stover 1987: 58). Likewise, David Samuelson concentrates on this particular aspect in the novel and he asserts that "its importance as a social document, as a representative artefact of a stage of Heinlein's career far outweigh whatever merits or demerits I claim for it as a work of speculative fiction" (Samuelson 1978: 147). In this respect, Heinlein's book can be inscribed along the modern mainstream writing, characterised chiefly by the adversary and subversive intention which is an old tradition in Western literature, and as Lionel Trilling says in the preface to his famous book about culture and literature, ***Beyond Culture***, the major purpose of modern writing is that "of detaching the reader from the habits of thought and feeling that the culture imposes, of giving him a ground and vantage point from which to judge and condemn, and perhaps

revise, the culture that produced him" (Trilling 1978: xvi). In addition, Leon Stover makes it clear, alluding to Heinlein's manifestations of patriotism in his personal life and in some of his works, that

> *His questioning of America is not un-American; that rather, it is at the core of what it means to be a patriotic American, distinguishing ours from all other traditions of national loyalty. We alone accept critical self-reflection as the essential part of our New World identity, our different "moral identity" as Walt Whitman put it, himself demonstrating it in the contrast between his political celebration of American democracy and his very hard-nosed sceptical prose on American failings and shortcomings (Stover 1987: 59).*

Therefore, Heinlein's choice of devising a new religion can be understood as stemming from his concern with the social forces in America making for such cults, and maybe his choice of Mike's last name "Smith," in reference to the founder of the Mormon church, gives enough evidence of his interest which became even more perceptible through his frequent correspondence with the founder of the Church of All Worlds (the real one) and his paid subscription to the church's magazine.

In spite of the wide polemic the book raised at the time of its publication, Heinlein could not perceive the influence it had on society as the decade went into progress. In fact, ***Stranger*** soon became a cult book among the young generation of the 1960's, especially university students, who were the successors to Kerouac's beatniks, hippies, and who initiated the counterculture movement that included many of the subversive values of the Beat Generation and much of Heinlein's religion as well. In the wake of the loss of John Kennedy's "dream of Camelot" and in shared opposition to the oppressive forces in the American society, heightened by the Vietnam War, the members of the counterculture found refuge from the sixties' social unrest in the practice of Heinlein's religion and regarded Heinlein as a sage and a guru who gave them direction what to do with one's life and how to achieve individual freedom and to cope with everyday existence. Therefore, Heinlein's book

contributed to paving the way for the social and cultural revolution of the sixties which bore its teachings out as its popularity grew throughout the decade. And much to Heinlein's surprise, it was revealed that some members of the Cultural Revolution went so far as to use *Stranger* as a sacred text from which they borrowed much of the jargon and concepts of the time such as "grokking," "water-sharing," "Thou art God," and "Nest," and to establish cults, especially in southern California, based on water-sharing, nests of free sexual rituals, group nudity, and mystical outlook on life. These members viewed Heinlein as a "patron saint" like Jubal in the novel, and Heinlein himself declared, "I must confess that I am startled at the effect it has on many people –especially when I receive letters starting 'Dear Father Jubal'" (Quoted by Searles 1975: 146), the fact which affirms that Jubal Harshaw is a stand-in for the author in the story. Moreover, in 1962, Oberon Zell-Ravenheart founded the Church of All Worlds, a neopagan religious organisation modelled in great part after Heinlein's religion in *Stranger,* adopting the same structure of circles of advancement like in Mike's church and embracing the same concepts of water brotherhood, unconventional family structures, polyamory, and social libertarianism. The church's mythology, though celebrating the gods and goddesses of Ancient Greece, includes science fiction elements to this day. Heinlein's interest in the religious movements in America led to his frequent correspondence with Zell, though he was not a member or a promoter of the church, but he was a paid subscriber to the church's magazine *Green Egg* until his death.

In spite of this great influence of the book, Heinlein's awareness of the dangers inherent in the presentation of his new religion came late in the sixties with the strange case of Charles Manson, a psychotic man with a criminal record living at a deserted movie-location ranch in California, who apparently took up Heinlein's book

Stranger as a Bible for his own religion. The story, revealed by the local newspapers, says that Manson and his five servile female followers founded a nest called the Mansion Family, in which they tried to live Mike's sexual utopia and to discorporate their imagined enemies. In August 1969, lacking Martian magic, the Family's members did their job of murdering actress Sharon Tate and six other people in her Hollywood home with ordinary butcher knives in what came to be called the Tate-Labianca Murders. Heinlein, who was blamed by his most hateful critics for being a major influence on Charles Manson, considered the story a complete fabrication and he viewed to mounting a libel suit against the original inventor of the lies. And although Heinlein's lawyer discovered, by interviewing Manson in jail, that the murderer had never read *Stranger* and had never heard of its author's name, the influence of the book on the Family's practices is undeniable in the same way as the influence of the Beatles' song "Helter Skelter" was proved throughout the investigation (the song's title was found written with the blood of the victims on the murder scene). All these effects and influences the book had on society made it emblematic of the sixties with its concern with the oppressive powers that violated human identity and extinguished individual freedom. In fact, *Stranger* can be seen as Heinlein's most eloquent novel that tried to bring about an apocalyptic change, presumably for the better, into human affairs, even though it failed to anticipate the accompanying negative effects its new morality brought in its wake. In praise of his own novel, Heinlein declared in an interview that if there is anything like "a universal best-seller" among his works in all countries where it has been translated, it is *Stranger* (Stated by Stover 1987: 60).

Conclusion

In conclusion, it clearly appears from the study of Heinlein's two major novels that the creation of fully developed characters is made subordinate to the writer's concern with themes and ideas, whether in devising a new military system or a new moral code in the form of a religious cult, since the place of individual persons in society and their identity cannot be restored without a revolution against the various oppressive powers and the daily pressures in contemporary society. Like in any other science fiction work, the neglect of character as a primary concern does not in fact reflect a weakness of treatment, but rather a depiction of the reality of the existence of man in a world that annihilates the self and eliminates individuality, making of humans a collective entity that acts in a mechanistic way lacking singularity and free will.

CHAPTER FIVE

The Destruction of Character in Philip K. Dick's Novels of the 1960's

Introduction

5.1. Philip K. Dick: Life and Career

5.2. ***Do Androids Dream of Electric Sheep?*** : The Nature of Humanity Questioned

5.2.1. Summary

5.2.2. Human versus Android or Human versus Inhuman

5.2.3. The Loss of Humanness in Dick's Dystopian World

5.3. ***Ubik***: The Reality Breakdown

5.3.1. Summary

5.3.2. Dead or Alive Characters

5.3.3. The Plight of Living in the Modern Technological World

Conclusion

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The Destruction of Character in Philip K. Dick's Novels of the 1960's

Introduction

As one of the leading and greatest writers in the history of post-war American science fiction, Philip K. Dick produced nearly forty novels and more than one hundred stories, several of these stand among the very best works in the genre and they still fascinate and attract the attention of readers and critics as well as the attention of moviemakers and cinema audiences. Dick's stature lies essentially in his pre-eminence in introducing his readers to some new alternative reality in which his protagonists question their humanness and the nature of reality so that their struggle becomes a quest for meaning and identity. Stalked by drugs, depression, failing personal relationships, and conspiratorial acts (presumably by the state's agents), Dick turned to the exploration of the inner space –minds- of his characters who are psychically tormented by the many adversities in the world they inhabit. Dick is a unique figure in the science fiction field whose gift can be explained by the strength and the perfection with which he depicts the strong relationship between the minds of his characters (with the alternate subjective reality they create) and the objective reality which no longer holds its status of privilege. This chapter is concerned with the analysis of Dick's characters in two of his best and most acclaimed novels of the 1960's: *Do Androids Dream of Electric Sheep?* and *Ubik.*

5.1. Philip K. Dick: Life and Career

Philip Kindred Dick was born on December 16, 1928 in Chicago, Illinois, to Dorothy Kindred Dick and Joseph Edgar Dick. Philip was accompanied into the world by his twin sister Jane Charlotte and they were born six weeks premature. Jane died six weeks later, and though he could not remember the actual event, the death of his twin sister was to haunt Philip K. Dick's personal life and writing through to his own death. His mother had repeatedly told young Philip the nightmarish story of his sister's death throughout his childhood that his missing sister came to life in his imagination and would later come to dominate his creative life. The impact of Jane's loss on Dick's fictional universe was apparent in his stories and novels in which he relies on the notions of twinning and twinned characters such as the real and unreal, human and android, dichotomies that dominate much of his best work. Dick vividly expressed this impact, "I heard about Jane a lot, and it wasn't good for me … I am damned always to be separated from her and with her, in an oscillation. I have her in me and often outside me, but I have lost her. Two realities at once: Yin/Yang" (Quoted by Robb 2006: 14). Jane's death did not just have a profound effect on Dick's psyche and psychological make-up, it also made an immediate difference to his family situation. Indeed, the relationship between his father and mother broke down, and by 1933 his father departed from the family, leaving his mother who was determined to take a job after moving to Washington D.C. to raise her son alone. Philip attended the John Eaton Elementary School from 1936 to 1938, and in June 1938 Dorothy and Phil moved to California, settling in Berkeley, where Dick was to remain for the rest of his life. From early childhood Dick developed a series of physical and mental ailments; in the mid-1940's he received intensive psychiatric treatment for agoraphobia and in 1946 he was diagnosed as suffering from

tachycardia, a rapid heartbeat, which would contribute directly to his early death. While at high school in Berkley, Dick suffered from severe vertigo which recurred throughout his life, especially during his brief time as a university undergraduate. Besides, in his late teens, Dick developed a state of schizophrenia which many observers relate to his troubled childhood and upbringing, including the tales he heard about his sister's death.

Dick's interest in science fiction began at the age of twelve when he read his first science fiction magazine called Stirring Science Stories by accident while he was actually looking for popular science. Dick was most amazed by stories about science, and with his interest and ability in storytelling, he began writing both science fiction and mainstream realist stories, influenced not only by pulp science fiction of the time, but also by the classics of mainstream literature, including those by Proust, Kafka, Pound, and Dos Passos, which Dick gorged himself on. Dick hoped one day to be published in the prestigious literary magazines like the New Yorker, but real life hardships intervened and forced him to get a job. So from 1948 to 1952, he was employed in a music record store in Berkeley owned by Herb Hollis who became his first mentor by allowing him to develop a passion for rock and classical music to rival that he had already had for writing. Dick's initial serious attempts at writing came in the late 1940's and were not science fiction; both the lost manuscript of *The Earthshaker* and the posthumously published novel *Gather Yourselves Together* (1994) were realist novels and they drew on his own experiences, including a version of his own imaginary sister and a short lived marriage which ended in divorce in 1948. During this period, Dick was living in a shared loft house with several arty types, and in September 1949, he enrolled in the University of California at Berkeley while he had at the same time to attend military

training, something he was deeply opposed to. However, continuing to suffer from recurring bouts of vertigo and agoraphobia, Dick attended the university for just one term and he dropped out of college in November 1949, and then he was given an official honourable dismissal from military service in January 1950.

All through this turmoil, Dick was writing and building up an impressive collection of pulp magazines, but his early stories were regularly rejected by the editors of literary journals and pulp magazines alike. It was, however, Anthony Boucher, one of the founding editors of the Magazine of Fantasy and Science Fiction and whom Dick first met in the Art Music Store, who would help Dick to become a published author. Boucher bought Dick's story "Roog" which appeared in the February 1953 issue of the Magazine of Fantasy and Science Fiction, but the first story to actually appear in print was "Beyond Lies the Wub," published in the July 1952 issue of Planet Stories, the magazine that can claim the honour of having first unveiled Dick's remarkable talent to the public. After "Roog" and "Beyond Lies the Wub," Dick began submitting stories to the pulps regularly, and over the next three years he sold over seventy stories to almost all the science fiction magazines such as Galaxy, Amazing Stories, Fantastic Universe, and If. By 1955, fifteen of his stories were grouped together for hardback book publication in the UK by Rich Cowan under the title *A Handful of Darkness* at a time when such hardback publication was almost unheard of for US pulp writers. The second collection of short stories published in book form was issued in the United States in 1957 by Ace Books under the title *The Variable Man*, containing five stories that had originally appeared in Space Science Fiction, Fantastic Universe, and Galaxy. Taking advantage of the explosion in pulp fiction and strongly supported by his second wife, Kleo Apostolides whom he married in 1950, Dick was writing and selling stories at the

rate of one a week, becoming what he had always yearned to be, a published writer with a stable and solid income. The only story which Dick ever sold to John W. Campbell's Astounding was "Imposter" which appeared in June 1953 and which contains much that Dick would later expand upon in his novels. It was the first significant step in establishing the themes and situations which would recur in his fiction and come to dominate the popular perception of what Dick's work was all about. The story is about Spence Olham, a defence researcher in Earth's war with the Outspacers, who is suspected of being a humanoid robot. He is accused of having killed and replaced the real Olham in an attempt by the aliens to infiltrate Earth's defence establishment. Implanted memories convince Olham that he is not the replacement, but the real one. In this story, all the major elements of the "Phildickian" universe were in place by 1953: androids replacing humans and the intriguing questions of what is real? and what is human? which all reveal Dick's subjective view of reality and his paranoid obsession with things being other than they seem. It is no surprise, then, that "Impostor" was to form the basis for a TV adaptation in 1962 as an episode of the British science fiction series "Out of This World" and a film under the same title of the story released in 2002 and directed by Gary Fleder.

In the 1950's, America was in the grip of widespread political paranoia with the rise of the red menace feared by those in power, with the result that any political expression was regarded as suspicious by the authorities and the FBI was tasked with the job of investigating on potential political subversives. Dick's wife had attended several political meetings as a student and had been photographed by FBI agents. In 1955, two FBI agents visited Dick and Kleo at home, intent on questioning her about her left-wing activities and about other persons in the photos. Although the couple

politely declined the request to spy for the establishment in exchange of an all-expenses opportunity to study at the university offered by the FBI men, Dick was left with a feeling that he was being targeted and under surveillance by the authorities which was to have a lasting impact on his life and work. Indeed, it was a feeling that would inform much of his fiction and cause him much anguish and intensify his paranoia in years to come. During this same period, Dick was dreaming of a career in the mainstream of American literature and he wrote eight realist novels between 1951 and 1958 which all failed to sell, and the only non-science-fiction novel published during his lifetime was *Confessions of a Crap Artist* (1975) which was adapted by French director Jérôme Boivin into a film in 1992 under the title *Confessions d'un Barjo*. But his science fiction novels all sold and thus Dick decided to bet everything on that genre and he had his first science fiction novel *Solar Lottery* published in 1955 by Ace Books to which Dick would sell the majority of his work through to the middle of the 1960's. Following the success of *Solar Lottery*, Dick produced a series of science fiction novels that deal with the notion of the failure of reality fused with the paranoia that was slowly growing in him, and these concerns would provide the thematic and philosophical backdrop for so much of his work and would become later central to the film versions of his stories and novels. The most remarkable novels of the 1950's that established Dick's reputation as a successful author are *The World That Jones Made* (1956), *The Man Who Japed* (1956), *Eye in the Sky* (1957), and *Time out of Joint* (1959).

By the end of the 1950's, Dick relocated to Point Reyes Station, a small town in Northern California, and he was working at an intensely prolific rate driven by the need to write in order to survive economically and fuelled by amphetamines that helped him keep working for long hours with less time for rest and sleep. At that

time, Dick's relationship with Kleo was crumbling and thus he welcomed the attention of Anne Rubenstein, a neighbouring widow with three daughters, whom Dick married in 1959 after he and Kleo got divorced. At the time of the birth of his first daughter in 1960, Dick's health problems had been recurring, and therefore he received prescription drugs for various physical problems, including tachycardia and vertigo, and during the middle of the decade he took LSD on several occasions, in addition to amphetamines to aid him in turning out the prodigious amount of fiction he wrote during the 1960's. In 1960, Dick produced two novels: *Dr. Futurity* and *Vulcan's Hammer* which reveal that Dick became more and more fascinated by the various unreal worlds he created in which people struggle to survive. While struggling to keep the money flowing in and achieve literary success, Dick was overjoyed to discover he was to be a father for a second time. However, Anne decided to have an abortion for economic reasons which came as a shock to Dick, reminding him of his sister's death and leading him to maintain an anti-abortion stance thereafter. After Anne's abortion, Dick buried himself in the I Ching, the oldest of the Chinese classic texts also known as the Book of Changes, which contains a divination system centred on the ideas of the dynamic balance of opposites, the inevitability of change and the evolution of events as a process. Dick became fascinated by the ancient Chinese oracle, spending much of his time studying it, and he began to guide his life decisions based on his daily consultation with the book. Meanwhile, the counterculture movement of the 1960's particularly attracted him and he agreed with many of its members' positions, such as their opposition to totalitarian government, their reaction against materialistic values, and their fascination with drugs and music. Much of Dick's fiction of the 1960's examined situations that reflect the mood of the decade which began in hope and an enthusiasm

for new lifestyles, but ended in pessimism and a sense of lost directions. So Dick turned to fiction and relied heavily on speed to provide him with the stamina needed to work on his novels for extended periods of time. Through 1961 Dick drafted *The Man in the High Castle* (published in 1962 and won a Hugo in 1963) which is one of his most accomplished works and best represents Dick's talent in depicting the alternate world that prevails in much of his fiction. The novel depicts an alternate world in which World War Two was won by the Axis Powers, and Dick populates this world with a variety of characters that are all subservient to the currents of history. However, there is one character, Hawthorne Abendsen (the man in the high castle), who has written a novel -based on his reading of the I Ching- that postulates a world in which the Allies won the war. The novel is considered subversive and thus banned, but it suggests the possibility that Abendsen's vision is the truth and that everyone else's is an illusion. So Dick's novel is considered a study of authenticity at every level of existence which is a theme carried out in almost all his subsequent works.

After this major novel came, in close succession, the writing of three further books which are among Dick's finest achievements. *Martian Time-Slip* (1964), which explores again Dick's obsession with the question "what is real?", is set among the struggling Earth colonies on Mars where the protagonist, Jack Bohlen, suffers regular visions of reality collapsing around him. *Dr. Bloodmoney, or How We Got Along After the Bomb* (1965), portrays a post-holocaust world where people work to rebuild the wasteland, but the major character, Dr. Bruno Bluthgeld, whose miscalculation while testing nuclear weapons causes the nuclear accident that leads to widespread fallout and mutations, seeks psychotherapy for his paranoia and guilt. The third novel, *The Three Stigmata of Palmer Eldritch* (1965), is set on both Earth

and its colonies on Mars where the real and the ersatz (artificial) interpenetrate through the use of hallucinogenic drugs. On Earth, a hallucinogenic drug named Can-D is widely used to overcome the oppressive reality of everyday life and substitute another where all is permitted and human beings come together in a shared and collective hallucination because none of it is really real. The drug is also used by colonists to surmount the daunting and psychologically monotonous life in the colonies and make it tolerable. However, suppliers of Can-D face opposition from the sinister Eldritch, whose own drug Chew-Z is destructive and pre-empts reality entirely, making each user isolated to his/her own world. Using drugs as reality-shapers is one of the devices used in many of Dick's novels to control the very nature of reality. In addition, the 1960's saw Dick composing and releasing more novels than in any other period of his career, and these include *The Game-players of Titan* (1963), *The Simulacra* (1964), *Now Wait for Last Year* (1966), *The Penultimate Truth* (1964), *The Unteleported Man* (1966), *The Crack in Space* (1966), *The Zap Gun* (1967), *The Ganymede Takeover* (1967), and *Counter-Clock World* (1967).

While Dick's productivity soared and his drug intake increased, his life with Anne descended into chaos to the stage where Dick became convinced that his wife was trying to kill him, and he even reasoned she had killed her first husband. By 1964, the marriage was over and Dick moved back to Berkeley where the Science Fiction Convention was held in 1964 and which Dick attended as a guest of honour. It was from his behaviour at this event that many of the great myths of Dick's life took hold. Indeed, tales of him writing while high on LSD and his reputation as a mad, drug-fuelled science fiction prophet emerged from this WorldCon and persisted ever since. By late 1964, Dick met Nancy Hackett, a student at Oakland Art College about half his age, whom he married in 1966, and it was through Nancy's relatives

that Dick struck up a friendship with the Episcopal Bishop of California, James Pike, with whom Dick had long theological discussions on the nature of reality, faith, life and death, and even life after death. Pike's presence in Dick's life would influence several of his later books dealing with death and entropy. When the couple moved into a house in San Raphael in 1968, Dick published two of his best and most widely acclaimed novels: *Do Androids Dream of Electric Sheep?* (1968) and *Ubik* (1969) which were both written in 1966. The first, filmed in 1982 by Ridley Scott as ***Blade Runner,*** is set in a post-holocaust world in which the mechanical simulacra (androids) figure as agents of illusion, climaxing Dick's obsessive concern with the question "what is human?", while *Ubik* features an alternate world in which a group of people find themselves after they have been apparently killed in an accident, but restored to a kind of half-life within a preservative machine. In this other world, the novel's protagonist, Joe Chip, receives cryptic messages about the mysterious Ubik, a product of apparently endless application. In 1970, Dick saw one of his darkest novels published, ***A Maze of Death,*** which explores the theme of death, carrying the influence of Bishop James Pike who told Dick about his son who committed suicide and his attempt to contact him after death. This novel marked the beginning of Dick's interest and dealing in theological and philosophical issues that dominated most of his later work.

During the late 1960's, Dick's dependence on drugs to write became even stronger and his precarious financial life began to spiral out of control in spite of the money he earned from his writing, but he spent all on acquiring drugs to the point that demands from the Internal Revenue Service resulted in the seizure of his car in 1969 in lieu of back tax payments. In the early 1970's, his wife and daughter (born in 1967) had gone and Dick was on his own again, and it was during this period that

Dick's notorious paranoia really kicked in with fears that he was being surveilled and targeted by unknown beings who threatened his life. Considering the amounts of Dexedrine and Benzedrine he was consuming, Dick was having a hard time and he was adrift with no one to anchor him, so he opened his house to all-comers from the neighbourhood, including street drug addicts. Dick's paranoid fears were realised in November 1971 when his house in San Raphael was burglarised, an event which was never explained either by Dick or the police who investigated. However, Dick developed several theories about who had committed the break-in, none of which was ever proved or disproved. Dick's reaction in spinning out different theories to explain the burglary was, in fact, typical of the author of so many novels questioning the very nature of reality, so that one of his theories involved Dick being responsible for the break-in himself. That idea was filtered into his novel *A Scanner Darkly* (1977) which is concerned with the effects of drug abuse, and it follows the decline of police agent Fred who infiltrates drug rings in the guise of dope-dealer Bob Arctor. Tracking the source of Substance-D, the drug sweeping the youth of 1994, Fred himself becomes an addict. The result is an inevitable identity confusion with Fred eventually investigating and spying on Bob Arctor, having lost track of the fact that he is both people. In this novel, Dick put much of himself and his experiences of real life drug addiction, making it one of his most personal and autobiographical novels, while keeping with his themes of multiple levels of reality and personal identity.

Invited to be the Guest of Honour at the Vancouver Science Fiction Convention in February 1972, Dick drafted a speech entitled "The Android and the Human" to deliver at the convention where his appearance was a triumph. After the speech, Dick saw a way to escape the life he felt trapped in and he decided to stay in Canada as he

insisted that his life was in danger if he remained in California. But his paranoia, his extreme loneliness and depression returned, resulting in a suicide attempt in March 1972. He was admitted to X-Kalay, a drug-rehabilitation centre in Vancouver, for a three-week stay, after which he emerged ready to leave the drugs behind and to begin a new life. After returning to California, the final phase of Dick's life and literary career began when a professor at California State University Fullerton suggested the University to take possession of any of Dick's literary works, and even the professor's students offered to help Dick and take him in until he got on his feet again. By July 1972, Dick met Tessa Busby who was to become his fifth and final wife and who became the anchor Dick needed in his life to allow him resume writing once more. Although Dick remained in a state of poverty and suffered recurring bouts of poor health and mood swings, his literary star and reputation was continuing to grow in the 1970's and his novels were in print and selling well in the UK, France, and Germany, with critical works and surveys of science fiction history beginning to include him as a key figure in the genre and with requests for interviews coming from both the mainstream media and science fiction magazines. In February 1974, *Flow my Tears, the Policeman Said* was published, securing nominations for Nebula and Hugo Awards, and won the John W. Campbell Memorial Award for Best Science Fiction Novel. In this novel, Dick explores the questions of his 1960's works about the essence of reality and the ever-present surveillance he suffered from in his paranoid state of real life. The story is about Jason Traverner, a big-name TV star, who is thrust into an alternate world –the police state of General Felix Buckman- in which he suffers the psychic shock of realising, after he loses his identification cards in a hotel, that no one in this world knows who he is and that his entire identity does not exist, with no record of him in any official database.

With the renewed stability and success, Dick and his family –his wife and his newly-born son Christopher- were happily settled in Fullerton, where the nearby University was housing his important papers. However, in the early spring of 1974, a series of events took place which was to change Dick's life and his work forever. What has become known in Philip K. Dick studies as the "2-3-74" experiences (shorthand for February-March 1974) resulted in a series of theological and philosophical texts in which Dick sought rationalist and religious explanations for these experiences. After a surgery on an impacted wisdom tooth, Dick was prescribed a term of painkilling drugs which resulted in Dick believing that he experienced a series of vivid visions he described as information-rich beams of pink light and geometric patterns, in which it was revealed to him that first century Rome co-existed with the modern world. And as the visions increased in length and frequency through February and into March 1974, Dick claimed he had a double life, one as himself in the modern world and one as a Roman inhabitant named Thomas in the first century. And while he was to wrestle with the meaning of these visions and dreams, he proceeded to write about them every night and in great detail for the rest of his life, exploring every possible explanation. It was as though Dick, the science fiction author who had conjured such novels as *Ubik* and *A Scanner Darkly*, had finally cracked, going mad himself and experiencing the plight of many of his characters. Dick wrote in a 1978 entry in his work *Exegesis*, "My life is exactly like the plot of anyone of ten of my novels or stories, even down to the false memories and identity. I am a protagonist from one of PKD's books, a mixture of "Impostor," *Time out of Joint*, *A Maze of Death*, if not *Ubik* as well" (Quoted by Robb 2006: 39). From 1974 until his death in 1982, Dick was struggling to comprehend what was occurring, questioning even his own sanity and perception of reality, and, spending

sleepless nights, he wrote about the events of "2-3-1974" in an ongoing eight-thousand-page journal entitled *Exegesis*, only a small portion of it was published in 1991 under the title *In Pursuit of VALIS: Selections from the Exegesis*, while the publisher Houghton Mifflin Harcourt promised to publish further parts from the journal in two volumes in 2011 and 2012. As 1975 dawned, Dick proceeded to incorporate his post-1974 experiences into his fiction, and the result was his three final novels which form the VALIS Trilogy. The first was *Radio Free Albemuth* (written in 1976) which was the first to deal in fictional terms with the Exegesis material and to include VALIS –acronym for Vast Active Living Intelligence System- which Dick theorised as a super-intelligent, extraterrestrial communication network, and sometimes as a transcendental, mystical mind that contacted him, and some other times as a divine communication or God. *Radio Free Albemuth* was originally titled *VALISystem A* when submitted to publication, but after his editor Mark Hurst suggested some revisions, Dick made radical changes that resulted in the new novel *VALIS* which was published in 1981. The original *VALISystem A* was published posthumously in 1985 as *Radio Free Albemuth*, and thus it is not part of the trilogy. After *VALIS*, which is about Fat's search for God while those around him doubt his sanity, Dick fashioned a sequel which was published in 1981 as *The Divine Invasion*, followed by *The Transmigration of Timothy Archer* in 1982. The VALIS Trilogy is heavily autobiographical and a deeply valiant self-analysis conducted within the framework of a longing search for meaning and exploring his religious obsessions and speculations discussed at length in *Exegesis*.

While writing during the 1970's, Dick was often under the influence of prescription amphetamines and his health was failing with periodic bouts of depression. And although his wife Tessa learned to live with his unusual lifestyle and

provided the support he needed, their marriage ended in 1977, resulting in another suicide attempt and a two-week stay in hospital. In spite of this experience, Dick felt capable to take up an invitation to deliver a Guest of Honour speech at the Science Fiction Convention in Metz -France- in 1977 and he wrote a piece entitled "If You Think this World is Bad, You Should See Some of the Others." His speech outlined a model of the universe consisting of constantly shifting parallel realities, and also tackled several theological and philosophical issues he had incorporated in his later novels since his 1974 experiences. The arrival of Dick's final year 1981 saw the production of the film ***Blade Runner***, based on his novel ***Do Androids Dream of Electric Sheep?***, which proved so influential that its visual style was incorporated into many other productions. Dick was invited by Ridley Scott in November 1981 to view a reel of special effects footage from the film and he was fascinated by it; however, Dick did not live to see the finished movie, released on June 25, 1982. After Dick's death, Hollywood became more and more interested in his novels and stories with their themes of alternate universes, the nature of reality and human identity mingled with such devices as mental illness, schizophrenia and drug use which have all become a Dickian landmark in cinematic production. The list of films made from Dick's works include ***Total Recall*** (1990), ***Screamers*** (1995), ***Minority Report*** (2002), ***Impostor*** (2002), ***Paycheck*** (2003), ***A Scanner Darkly*** (2006), and ***Next*** (2007), while future films planned to be produced or released are ***Radio Free Albemuth*** (completed and waiting distribution), ***Ubik*** (of which Dick himself wrote a screenplay, but the film was never made. Now it is in negotiation), ***Flow my Tears, the Policeman Said*** (announced by the Halcyon Company), and ***The Man in the High Castle*** (to be produced by Ridley Scott for BBC as a mini-series).

Shortly before his death, Dick was working on a new novel under the title *The Owl in Daylight* which continues with his religious and metaphysical themes. The novel was not finished and it was never published. On February 18, 1982, Dick was found unconscious on his apartment floor suffering a serious stroke. In hospital, further strokes followed and Dick died of heart failure on March 2, 1982. Dick's father survived him and arranged for his son to be buried in Fort Morgan, Colorado, next to his sister Jane. Back in 1929, when Jane had died, Dick's parents had been sure that their baby son would soon follow her, so her tombstone had both their names carved on it, and Dick's name had been waiting for him on his grave until 1982. Decades after his death, Philip K. Dick is always regarded as a prophet in creating a sub-genre in science fiction no other movement in the field, not even the New Wave, can match. His treatment of philosophical issues and metaphysical questions that haunt man in the modern world and his complex themes about the nature of reality and personal identity make the whole body of his work postmodern in all sense and thus deserves study which will focus in this part on two major novels of the 1960's: *Do Androids Dream of Electric Sheep?* and *Ubik.*

5.2. *Do Androids Dream of Electric Sheep?* : The Nature of Humanity Questioned

Do Androids Dream of Electric Sheep? was completed in 1966 and published in hardcover by Doubleday in 1968 during a period when Dick's obsession with his subject matter about the nature of reality and what distinguishes a real human from an artificial one in a highly technological and mechanised world became much stronger and gained more weight ever since. *Do Androids* is one of Dick's best and most important novels of the 1960's because of its exploration of the questions which

continued to haunt him until his death, and after it was made into a film, the novel's value and importance grew steadily and began to receive more critical consideration both within and outside the science fiction community.

5.2.1. Summary

Do Androids takes place in the year 1992 in San Francisco after the nuclear war (called in the novel World War Terminus) has spread a cloud of radioactive dust across the globe. The mass extinctions of animal and plant species and the effects of the fallout on surviving humans have led the Earth governments to encourage immigration to colonies on Mars by offering each immigrant an android as a servant that helps in doing every work possible on that distant planet. The remaining humans on Earth have developed a caste system consisting of "regulars" and "specials." Regulars are people who are not affected by the radiation poisoning, but they are constantly threatened by the radioactive dust that damages their genes and affects their physical and mental abilities. After the discovery of the damage through regular periodic checkups, people are classed as specials who are denied normal social life and are not even allowed to immigrate to off-world colonies. In this decaying and slowly dying world, an obsessive value has been placed on the living animals that remain, and owning one is considered both a status symbol and a sign of righteous empathy. For those unable to afford the exorbitant prices of real animals, a whole industry and a thriving false-animal trade have arisen to sell extraordinarily life-like mechanical reproductions of extinct or dying species, which are nearly indistinguishable from real ones. These electric animals, like any mechanism, require periodic maintenance and repair whose expenses are heavily felt by the owners. In addition, both real and imitation animals are expensive and their prices are listed in

the Sidney's Catalogue which is updated monthly and bought and checked regularly by those interested in purchasing a live or an electric animal for their social status.

The other industry that has flourished after the war is the manufacturing of androids that are made of biological materials and designed to be as much like humans as possible in flesh, intelligence, and emotion. Androids are manufactured to serve as slaves for the Martian colonists and they are banned on Earth, but as more advanced types of androids become more humanlike and more intelligent, they escape from servitude by killing their masters and organising illegal trips to Earth to live and pass as humans. Some types of androids are designed with implanted synthetic false memories which provide a false sense of authentic humanity which the androids themselves are not aware of. Bounty hunters from various police departments on Earth are mobilised and sent to locate the fugitive androids and retire (kill) them. As android technology has improved, bounty hunters apply an empathy test, called the Voight-Kampff Test, to distinguish real humans from humanoids by asking question designed to evoke an emotional response, often including situations in which animals are involved, and then measuring the empathetic responses indicated by the test machine.

In parallel to the devotion demonstrated toward animals, the novel posits a religion called Mercerism, initiated by the religious cult figure Wilbur Mercer, which allows Earth's inhabitants to extract some hope from their constricted and unhappy lives in the wake of the nuclear holocaust. In this religion, empathy boxes are used individually by believers to be simultaneously fused into a collective consciousness, experiencing together the suffering of Wilbur Mercer who is continually ascending a steep hill while being stoned by unknown and unseen assailants. When Mercer is hit,

all those who are in contact with him through the empathy box actually bleed. Mercer declares that androids must be killed because they are killers and a threat to humans since they lack the human qualities of understanding the suffering of others and caring for them. Mercerism is countered by the television program of Buster Friendly which hosts celebrities and attracts wider audiences that are encouraged to partake in a kind of consumerist spirituality and to accept androids as human equals.

The story happens in a single day in the post-holocaust wasteland of San Francisco and opens in the apartment of bounty hunter Rick Deckard and his wife Iran who live a thoroughly artificial life centred upon the penfield machine, a technological device that provides artificial brain stimulation inducing a variety of moods by dialling numbers corresponding to various settings of mood control. As Dick Deckard leaves for work, Iran tries to watch TV which broadcasts a note on the day's weather with the spread of fallout, and then she decides she does not want to dial anything on the mood organ. Going to his car on the roof, Deckard stops to feed his electric sheep which he has bought after his real one died of tetanus. Deckard takes a moment to admire his neighbour's real horse, and upon hearing that the horse is pregnant, he feels chagrined and asks his neighbour to sell him the colt of his horse. When the neighbour refuses, Deckard admits that his sheep is false although he knows that people will look down on him from a social standpoint. So Deckard wants to make money so that he can buy a big live animal to improve his social status, and the only way to achieve his goal is to retire escaped androids for the substantial reward of one thousand dollars for every outlaw android he kills.

When Deckard arrives at work at the Hall of Justice on Lombard Street, his superior Police Inspector Harry Bryant explains the new mission assigned to him.

Deckard is informed that eight androids have escaped from Mars after killing their masters and that San Francisco's lead bounty hunter Dave Holden has been shot down by one of the escapees and is now in hospital suffering a laser track through his spine after he has retired two of the eight fugitive "andys." So Deckard will be acting as senior bounty hunter for the first time succeeding to Holden and thus he must fulfil his assignment to kill the six remaining androids of a particularly advanced and dangerous type named Nexus-6. The first step in Deckard's mission is to go to the androids' manufacturer, the Rosen Association, in Seattle –Canada- to learn about this newest and most humanlike model and to check the accuracy of the Voight-Kampff Empathy Test with this new model which, since its release in the late 1991, most police agencies that deal with escaped androids have been asking to withdraw from the market. When Deckard lands the hovercar of the police department on the roof of the Rosen Association building, he is received by Rachael Rosen, the niece of the company's president, Eldon Rosen. While discussing the selection of androids to be submitted to the test, Eldon doubts the accuracy and efficacy of the Voight Empathy Test used by the police to distinguish androids from humans, but Deckard confidently wants to do his job with the new model. Rachael is proposed to take the test, and when it concludes that she is not human, the Rosens assume that the test is flawed and a failure, and then they attempt to bribe Deckard by offering him a real owl to make him admit the deficiency of the test. However, Deckard decides to test Rachael again by asking more questions after which he is satisfied that his test results are accurate; Rachael is actually an android and Eldon explains that she is the property of the company used as a sales device for prospective immigrants. Deckard feels that the Rosens have nearly come close to undermine the scale, the only method

they have for detecting androids, and now, after this result, he has to face six more of them and earn the bounty money to purchase the live animal he longs for.

Alternating with Deckard's story, the novel tells the story of John Isidore, a special with a low I.Q. who works as a driver for a veterinary clinic that cares for and repairs artificial animals. As a special, Isidore cannot qualify to leave Earth and he lives alone in a deserted apartment building on the decaying outskirts of San Francisco with little contact with other people who consider him a mentally retarded "chickenhead" after he has failed to pass the minimum mental faculties test over a year ago. Isidore seeks spiritual release from his troubles by fusing via the empathy box with the other users, sharing the experience of Wilbur Mercer in his arduous hill-climbing process. Like the Deckards, Isidore is a devotee of Mercer and he spends much of his time, while not at work, squeezing the handles of the empathy box and enjoying the spiritual fusion. To Isidore's surprise, a new resident, a woman named Pris Stratton, moves into the building and soon the lonely Isidore attempts to befriend her and offers to help her with the furniture in her ruined new apartment. Isidore notices something strange in Pris when she hesitates about her identity and tells Isidore that her name is Rachael Rosen before she says her real name. Pris proves to be a runaway android, made identical in appearance to Rachael Rosen, but for Isidore, there is no difference between androids and humans because they are all alive.

After returning from his mission in Seattle, Deckard heads for the San Francisco Hall of Justice where he meets Inspector Bryant who gives him details about the first Nexus-6 he must face and retire and provides him with a sheet that contains the necessary information concerning all six escaped androids. Bryant also tells Deckard

that a police agent from the Soviet police department (W.P.O.) named Sandor Kadalyi is coming to assist him and that he will not share the bounty money Deckard will earn from retiring the andys. Deckard's first Nexus-6 target is named Polokov and works as a scavenger, a job done by specials, and it is the android that has shot down Dave Holden. From the police department, Deckard heads for Polokov's place of work where he is told that Polokov has not shown up for work, and then he moves to his apartment which he finds empty. So Deckard decides to go to look for the second android on the list, Luba Luft, who poses as an opera singer in the San Francisco Opera. Meanwhile, Deckard receives a call from Rachael who proposes to help him in looking for the fugitive androids, and when he declines her offer, she gives him advice that the Nexus-6 types are not easy to retire because they are super intelligent and quite agile. At that moment, Kadalyi joins Deckard in his hovercar and immediately Deckard discovers that he is the android Polokov disguised as a Soviet police agent and he kills him, making his first one-thousand-dollars reward.

After retiring Polokov, Deckard goes to the Old War Memorial Opera House where he finds Luba Luft performing the role of Pamina in Mozart's opera *The Magic Flute,* and after she finishes, Deckard moves to her dressing room where he asks to administer the empathy test on her. Embarrassed by his questions, Luba calls a police officer who arrests Deckard and takes him to San Francisco's Mission Street Hall of Justice, a police station that Deckard has never seen before and in which no one recognises him as a bounty hunter and the department's officer accuses him of being an android posing as a bounty hunter. The building turns out to be a fake police station staffed by androids and is presided over by Inspector Garland. During a conversation with Deckard, Garland reveals that both he and Phil Resch, the bounty hunter introduced to Deckard, are androids and that Rusch does not know his own

true identity because of the implanted memory system he is designed with. When Resch discovers the identity of Garland, he kills him and escapes with Deckard, heading for the opera house to retire Luba Luft. Luba leaves the opera house to the museum where she is arrested by both Deckard and Resch, and in the elevator Resch fires her with his laser tube. Luba is still alive, crouched against the wall of the elevator, so Deckard shoots her with his own laser gun. After killing Luba Luft, Deckard becomes confused about the killing of androids for the first time in his life because he begins to feel empathy toward some of them such as Luba Luft who has talent and voice as a singer. Deckard falls into deep introspection about his job and he eventually reaches the conclusion that he is part of the form-destroying process as a destroyer of androids and he even thinks of leaving his job and immigrating to Mars. But Deckard realises, as Resch tells him, that the androids are murderous illegal aliens masquerading as humans and they would have killed him in their faked police station, and thus he decides to go on to retire the remaining andys.

Then the novel's action moves to Isidore who heads home after his day at work, carrying with him food items to his new neighbour Pris. In her apartment, Pris tells Isidore about life on Mars and about her friends with whom she has come to Earth. While speaking, two friends of Pris, Roy Baty and Irmgard Baty, arrive and Pris introduces them to Isidore who confirms that they are androids from Mars. In a private conversation, Roy Baty informs Pris that the other androids are killed and they –Roy, Pris, and Irmgard- are the only ones remaining. Irmgard suggests to Pris to move in with Isidore for her protection from bounty hunters, and though Isidore knows that they are androids and that Roy is their leader who has organised their trip to Earth, he accepts to provide shelter and protection for them and he even helps in moving Pris's belongings into his own apartment.

After retiring three androids (Polokov, Garland, and Luba), Deckard has his three thousand dollars bounty, and as he quits work in the evening, he flies across the town toward an animal store and buys a genuine female goat that costs him his entire bounty money. Deckard's wife is very happy when she sees the animal that seems curing her depression, and thus she invites Deckard to fuse with Mercer through the empathy box. While in fusion, Inspector Bryant calls Deckard on the vidphone and asks him to retire the remaining andys tonight and gives him their new address in the suburbs of San Francisco. Deckard feels so tired after an eventful day and he knows that the remaining androids are the most dangerous, so he thinks of Rachael's assistance she has already offered and calls her to meet him in a hotel room in San Francisco. When Rachael arrives, Deckard tells her about the three androids hiding in the suburbs, and from the sheet Deckard shows her, she recognises Pris who is designed identically in her own image. Rachael agrees to retire Pris and she even gives Deckard a metallic object which he can use to cancel an android into catalepsy. Rachael goes to bed with Deckard and then they leave the hotel heading toward the suburbs to kill the three remaining androids. In Deckard's hovercar, Rachael reveals that the Rosen Association has used her to stop him killing androids by sleeping with him and that she has done so with other bounty hunters. She tells him that he will not be able to kill androids, not even her because she is the legal property of the company and not an escaped andy from Mars. Deckard is depressed and he admits her victory over him, so he lets her go but he continues his way to the place where the last androids hide.

In his apartment, Isidore feels happy in the company of the three androids who have come to break the dull life he leads. Pris asks Isidore to bring her TV set from her apartment to watch Buster Friendly's program, and when he goes downstairs he

finds a spider which he brings joyfully to his apartment. While Roy and Irmgard are watching the Buster Friendly show which releases the most important news that Wilbur Mercer and his religion are a fake and that the whole image on the empathy box is the work of a former Hollywood special effects man, Pris takes the spider which may be the last one on Earth and proceeds to cut its legs which terrorises Isidore. Isidore is deeply affected by what happens to the spider and he is equally shocked by the fact that the religion he believes in is a fraud and that Mercer is a swindle. Isidore takes the mutilated spider to the kitchen and in his hallucination he speaks with Mercer who appears to him and gives him back the spider with its snipped-off legs restored. As a result, Isidore feels that nothing has changed and Mercer is still here when needed, and at the same time Pris reveals that Buster is an android and no human on Earth knows about it.

While Isidore and the three androids are in his apartment, the alarm bell, which Roy Baty has placed to detect the presence of bounty hunters, clangs, and Irmgard and Pris ask Isidore to go out and prevent the bounty hunter from entering. Isidore makes his way out, the spider still in his hand, and as he puts it in a verdant spot in the vicinity, Deckard appears and asks Isidore to show him the apartment where the androids hide. When Isidore refuses to help him, Deckard goes alone and meets Pris outside the apartment and kills her thanks to Mercer who appears and saves him from being shot in the back by Pris. With the detection gear that registers the presence of cephalic activity, Deckard locates the apartment and presents himself as Isidore, and when Roy and Irmgard open the door he kills them at once. Deckard accomplishes his mission by killing six androids, earning him a citation for a record number of kills in one day. When he returns home, he finds his wife waiting for him on the roof and she tells him that Rachael has killed their goat by pushing it off the roof. Totally

depressed, Deckard flies north in his hovercar to an isolated desert to meditate, thinking about his job, about Mercer, and about his sexual intercourse with Rachael. Walking up a hill in the manner of Mercer, Deckard is struck by a rock whereupon he seems to awaken from his mental fusion with Mercer and he quickly returns to his car. Before getting in the car, he finds a toad, thought to be extinct, and he happily brings it home where his wife discovers that the toad is in fact synthetic, but Deckard does not seem to mind anymore. Deckard refuses to use the mood organ to feel better and he goes to sleep, while his wife calls a store selling animal accessories and asks for artificial flies for the toad, telling the saleswoman that her husband is devoted to it.

5.2.2. Human versus Android or Human versus Inhuman

The depiction of characters in *Do Androids* is centred on two classes of beings, humans and androids, that Dick has already used in his earliest stories to explore the question of the nature of humanity and the relationship between organic and mechanical life in a heavily industrialised, technological and apparently soulless world. To dramatise his answer, Dick relies heavily on doubles with various sets of character doubles, both human and android, and he uses a double narrative line. Although Rick Deckard is the novel's protagonist and Dick's major viewpoint, John Isidore constitutes the centre of the secondary narrative, and his identity and action appear in the chapters interwoven with the Deckard chapters, echoing the identity and action of Deckard but reversing them. The comparison between Deckard and Isidore is done through their relationships and encounters with various mechanical constructs (humanoids and artificial animals) which take place in the course of one day and which reveal the complexity of the question of authenticity in the distinction

between human and android, echoing the modern concern of the relationship between humans and machines.

The major narrative traces Deckard's encounters with seven androids and examines the change in his awareness resulting from each of these encounters. As the day begins, Deckard is presented as a man of law and of conventional convictions who views androids as insidious and a threat to humans, and thus they must be killed. When Deckard is given the assignment by his police chief Inspector Bryant to destroy the six escaped androids from Mars, he is certain of his ability to distinguish android from human, not by superficial appearance because they look like humans and not by intelligence because they are as intelligent as humans, but by their lack of empathy and of the genuine human emotional capacity to care about others. The androids in Dick's novel are not mere intelligent machines; they are rather artificial humans made of organic materials and they have free will and emotions like fear and joy and they can even believe themselves to be humans because of implanted artificial memory tapes. The only thing they seem to lack is the ability to identify with the sufferings and joys of other people and even other life forms; therefore, they appear to be cold and indifferent to anyone's survival but their own and they are unable to fuse with others on Mercer's empathy box. Deckard's certainty of being able to distinguish androids from humans comes from the use of the Voight-Kampff Empathy Test which has proved its accuracy in many earlier instances and according to which Deckard is also certain he has never killed an authentic human being. Besides, Deckard believes that he is justified in killing androids because they are escaped killers from Mars and even Mercer considers them murderers that must be killed:

Evidently the humanoid robot constituted a solitary predator. Rick liked to think of them that way; it made his job palatable. In retiring –i.e. killing- an andy he did not violate the rule of life laid down by Mercer. You shall kill only the killers, Mercer had told them the year empathy boxes first appeared on Earth ... For Rick Deckard an escaped humanoid robot, which had killed its master, which had been equipped with an intelligence greater than that of many human beings, which had no regard for animals, which possessed no ability to feel emphatic joy for another life form's success or grief at its defeat –that, for him, epitomized The Killers (28).

Throughout the major narrative, Deckard goes through various episodes in his encounters with androids which dramatise the inner changes that alter him from a killer to a man who abhors violence and that disorient him from his earlier conviction that his conventional view of reality and morality is the correct one. His first encounter with Rachael of the Rosen Association makes him for the first time aware of the difficulty to distinguish between a human and an android as he finds himself unable to determine whether she is truly an android or merely a schizoid human –a human who is cold and unable to respond emotionally. It is only after one last question in administering the Voight test that Rachael's android nature is established, making Deckard aware of the possibility of error in trying to detect androids by using technological devices, and thus his uncertainty grows as the construction of more advanced humanoid robots makes it more and more difficult for the currently available scale to detect. After Deckard discovers that Rachael is a Nexus-6 model and that she does not know about it until the test reveals her nature, he realises that

She must be a Nexus-6. I'm seeing one of them for the first time. And they damn near did it; they came awfully damn close to undermining the Voigt-Kampff scale, the only method we have for detecting them. The Rosen Association does a good job –makes a good try, anyhow- at protecting its products (52).

Deckard's second encounter leads him to realise he cannot trust his perceptions of reality when the android Max Polokov has so successfully posed as a Soviet police

officer named Kadalyi that he nearly kills Deckard before Deckard discovers the disguise when he notices the unusual type of laser tube Polokov carries with him. After killing Polokov, it is revealed that "the encounter with Kadalyi-Polokov had changed his ides rather massively" (81). Now he becomes aware that reversal and disguises have become part of reality and that things may not actually be as they first appear. After Polokov, the first female android that Deckard is assigned to retire is Luba Luft who is to cause a massive transformation in Deckard's consciousness and to contribute to his moral awakening and also to his confusion about what elements make for the quality of humanness. When Deckard sees Luba for the first time on stage singing with great beauty an aria from his favourite opera, Mozart's *The Magic Flute,* he is immediately fascinated by the feminine and creative part of human nature she mirrors: "On the stage Luba Luft sang, and he found himself surprised at the quality of her voice; it rated with that of the best, even that of notables in his collection of historic tapes. The Rosen Association built her well, he had to admit" (84). While admiring her beautiful performance, Deckard draws a parallel between Mozart who died in his thirties not long after writing his famous opera and Luba Luft whose fate will be the same as Mozart's when she finishes singing. Meanwhile, Deckard realises, "I'm part of the form-destroying process of entropy. The Rosen Association creates and I unmake" (86), and he is even shocked when Luba points out that he is hard and indifferent, suggesting he take the test to determine if he too is an android; she tells him, "You must be an android ... because your job is to kill them, isn't it? ... You seem so peculiar and hard and strange" (86-87). Deckard does not finish the test with Luba and he is taken to the fake police station where he becomes vividly aware, after discovering the true identity of Inspector Garland, that any supposed reality can be only an illusion that one's mind may accept as real.

In the alternate police department, Deckard is introduced to Phil Resch, the bounty hunter who Inspector Garland claims is an android, but who thinks he is human. Resch escapes with Deckard after killing Garland, but Deckard is uncertain of Resch's true nature and he carefully hides his reaction when Resch asks him if he thinks of androids as objects: "I did it at one time ... when my conscience occasionally bothered me about the work I had to do; I protected myself by thinking of them that way but now I no longer find it necessary" (108). When Resch later tests out as human, Deckard is prompted to question the difference between humans and androids more directly than he ever has and he even becomes progressively uncertain of the inhumanity of androids. Indeed, Deckard realises that Resch is his shadowy double in inner appearance; they are both bounty hunters who kill androids and they are unable to feel empathy in their cold-blooded killing of Luba Luft. As Deckard looks at his killer double, he perceives that Resch is a man who enjoys killing for its own sake, someone whose humanity is compromised, despite his human status. Deckard confronts Resch after retiring Luba with the evidence: "I see a pattern. The way you killed Garland and then the way you killed Luba ... I know what it is. You like to kill. All you need is a pretext. If you had a pretext you'd kill me" (118). So Deckard's encounter with Resch makes him recognise that he may have become what he abhors in Resch, his cold-blood and indifference, his violence and his lack of compassion. After Deckard kills Luba Luft, the novel recounts an important shift in his thinking as he begins to consider his humanness:

> *He had never thought of it before, had never felt any empathy on his own part toward the androids he killed. Always he had assumed that throughout his psyche he experienced the android as a clever machine –as in his conscious view. And yet, in contrast to Phil Resch, a difference had manifested itself. And he felt instinctively that he was right. Empathy toward an artificial construct? He asked himself. Something that only pretends to be alive? But Luba Luft had seemed genuinely alive; it had not worn the aspect of a simulation (121).*

This reflection leads Deckard to reconsider his reaction to Luba's killing and he agrees to use the Voight machine to test his own emotional responses to questions about Luba's death. To his surprise, Deckard discovers that he is emotionally affected by the fact of executing a female android:

> *Rick said, "I'm capable of feeling empathy for at least specific, certain androids. Not for all of them but –one or two." For Luba Luft, as an example, he said to himself ... I wonder, he wondered, if any human has ever felt this way before about an android (122).*

Deckard has this feeling about Luba at the time of her death when he confesses to Resch, "I'm getting out of this business ... I can't anymore; I've had enough. She was a wonderful singer. The planet could have used her. This is insane" (117).

By questioning his occupation's precepts, Deckard begins to reclaim the conscience of his human nature which he has suppressed for so long. His spiritual growth which seems to obscure the rigid boundaries between human and android does not come without an internal struggle which presents the problematic dichotomy: the humanity of androids and the inhumanity of their destroyers, and therefore, the question that haunts Dick and his protagonist is: how can we prove to ourselves we are real human beings and not androids? This shattering feeling becomes so strong that Deckard can hardly go on with his assignment of killing androids, and instead he goes to an animal store and purchases a genuine female goat and then returns home where he merges with Mercer through the empathy box. Fearing he will violate and lose his newly discovered identity if he continues to kill androids, Deckard asks Mercer for help, but Mercer's answer does not bring him comfort and does not dissipate his confusion and uncertainty; Mercer tells Deckard,

> *How can I save you ... if I can't save myself? ... Don't you see? There is no salvation ... You will be required to do wrong no matter where you go. It is the basic condition of life, to be required to violate your own identity. At some time, every creature which lives must do so. It is the ultimate shadow,*

> *the defeat of creation; this is the curse at work, the curse that feeds on all life. Everywhere in the universe (152-153).*

The view expressed by Mercer evokes Dick's philosophical idea he examines in most of his novels and which maintains that nothing is comprehensible in this complex world and still one must go on in spite of the psychic damage and suffering caused to individuals. Rick Deckard goes on with his moral confusion and uneasiness, and before he goes to retire the remaining androids, he finds himself sexually attracted to Rachael whom he finds "cheerful and certainly as human as any girl he had known" (167). Through the sexual union between Deckard and Rachael, Dick intends to examine the possibilities of human-android relationships which he depicts as the example of falsity and mechanical motion devoid of emotional response from both sides. Deckard yearns for something more than the barren sexual act can produce; indeed, he hopes he will lead her to help him retire her twin android Pris, which she promises to do before their union. By accepting this relationship, Deckard violates his human identity, suppressing his genuine human feelings and becoming more androidlike. Rachael, on the other hand, appears first with true human feelings when she reveals to Deckard her concern about her nature and identity as android so that it is difficult for the reader not to sympathise with her. Indeed, Rachael seems to experience one of the most painful experiences which she exposes to Deckard before their lovemaking,

> *Androids can't bear children ... Is it a loss? I don't really know; I have no way to tell. How does it feel to have a child? How does it feel to be born, for that matter? We're not born; we don't grow up; instead of dying from illness or old age we wear out like ants. Ants again; that's what we are. Not you; I mean me. Chitinous reflex-machines who aren't really alive ... I'm not alive! You're not going to bed with a woman (165).*

Paradoxically, any form of sympathy toward Rachael is reversed after the sexual act when she turns out to be seducing bounty hunters to stop them from killing

androids. She reveals to Deckard on their way to destroy the three remaining androids that her promise to help him has been a mere manoeuvre to get him in bed so that she could make him psychologically incapable of doing his job, a performance she has successfully carried out with other bounty hunters belonging to various police departments. Deckard is shocked when Rachael tells him, "Anyhow, you know the truth, the brick-hard, irregular, slithery surface of truth. I'm just an observer and I won't intervene to save you; I don't care if Roy Baty nails you or not. I care whether I get nailed" (163). Eventually, Rachael's attitude evokes Dick's depiction of androids as indifferent creatures, devoid of empathy and compassion in spite of their biological organic nature and their advanced intelligence. The final proof of Rachael's inhumanity comes when she kills the real goat Deckard purchases as a replacement for his electric sheep. Rachael's callousness in pushing the goat off the roof emphasises her foreignness in a culture that reveres living creatures as symbols of economic and emotional status for humans, and conclusively proves that Deckard's sympathy for her is misguided, reaffirming the prejudice against androids that he has held all along. Therefore, empathy is depicted as the trait that definitively separates humans from androids, but when Deckard executes the three last androids and he completes his mission with success, he cannot muster and feel any pride in this accomplishment since by compromising his empathic feelings, he is no more than "a mechanical echo of Rachael's emotional numbness" (Quoted by Vest 2007: 18) as Dick states in his essay "Notes on *Do Androids Dream of Electric Sheep?*" Eventually, Deckard has been changed by his experience; he no longer loves his job as a policeman and a bounty hunter and he recognises that Mercer's view is right:

> *What a job to have to do, Rick thought. I'm a scourge, like famine or plague. Where I go the ancient curse follows. As Mercer said, I am required to do wrong. Everything I've done has been wrong from the start. Anyhow, now*

> *it's time to go home. Maybe, after I've been there awhile with Iran, I'll forget (193-194).*

Back home in the end of the novel, Deckard feels like "nothing but a crude cop with crude cop hands" (208) because he has been defeated and he has been forced to kill. The ending of the novel is pure irony and contradiction. After the killing of his goat, Deckard flees alone into the desert in anguish and he experiences a vision while climbing a hill like Mercer:

> *It's strange. I had the absolute, utter, completely real illusion that I had become Mercer and people were lobbing rocks at me. But not the way you experience it when you hold the handles of any empathy box. When you use an empathy box you feel you're with Mercer. The difference is I wasn't with anyone; I was alone ... Mercer isn't a fake unless reality is a fake ... I can't stop being Mercer. Once you start it's too late to back off. Will I have to climb the hill again? he wondered. Forever, as Mercer does ... trapped by eternity (201).*

Deckard's spiritual exhaustion stems from the loss of faith in any specific ideology or institution in the immoral dystopian world he lives in. He can no longer invest his belief in any form of reality that can turn out to be a fake, a disguise, or an illusion. At one moment, he believes his finding of the toad is a kind of redemption and a sign of regeneration, but upon taking it home he discovers it is an electronic construct. Deckard does not seem to care and he tells his wife, "It doesn't matter. The electric things have their lives, too. Paltry as those lives are" (207-208). In fact, Deckard's attitude suggests that artificial creatures (androids and electric animals) must be integrated within living consciousness and must be loved because they stand for what humans have become in this devastated and almost lifeless world. Like Mercer, Deckard finally becomes aware that "there is no salvation" (153) and that man in this world is born under the curse of having to do wrong and to violate his own identity with the result that his life and consciousness have become undistinguishable from those of the mechanical constructs he creates.

In contrast to Deckard, John Isidore represents the typical human being whose genuine human feelings, his compassion for all creatures, his generosity, and his sense of sacrifice have not been lost or changed by the conditions of life in the dystopian world Dick has created. In spite of his intellectual disqualification and genetic deformation, Isidore accepts all forms of life and existence, whether real or artificial, as equal and having the same worth and value. As the novel opens, Isidore is portrayed as a lonely man living in an isolated apartment building in the decaying suburbs of San Francisco. Because of the effects of the radioactive dust that lingers all over the planet, Isidore is classed as a "special" who is treated as a pariah in a society based on a caste system that has been developed after the World War Terminus:

> *He had been a special now for over a year, and not merely in regard to the distorted genes which he carried. Worse still, he had failed to pass the minimum mental faculties test, which made him in popular parlance a chickenhead ... And there existed chickenheads infinitely stupider than Isidore, who could hold no jobs at all, who remained in custodial institutions quaintly called "Institute of Special Trade Skills of America" (17-18).*

The novel describes the outcast status of specials in severe and stark terms:

> *Loitering on Earth potentially meant finding oneself abruptly classed as biologically unacceptable, a menace to the pristine heredity of the race. Once pegged as special, a citizen, even if accepting sterilization, dropped out of history. He ceased, in effect, to be part of mankind (15).*

As a special, Isidore lives alone without hope surrounded by silence and all forms of decay that make the spectre of death and entropy the only fate hanging around:

> *He lived alone in this deteriorating, blind building of a thousand uninhabited apartments, which like all its counterparts, fell, day after day, into greater entropic ruin. Eventually everything within the building would merge, would be faceless and identical, mere pudding-like kipple piled to the ceiling of each apartment. And, after that, the uncared-for building itself would settle into shapelessness, buried under the ubiquity of the dust. By then, naturally, he himself would be dead, another interesting event to anticipate as he stood here in his stricken living room alone in the lungless, all penetrating, masterful world-silence (18-19).*

And even when Isidore turns on his TV set, which gets only the government channel, the advertisements, directed at the regulars, frighten him; in fact, they "informed him in a countless procession of ways that he, a special, wasn't wanted. Had no use. Could not, even if he wanted to, emigrate. So why listen to that? He asked himself irritably" (19). In spite of his mental limitations and his social status, Isidore has a job as a driver of a pickup and delivery truck for a false-animal repair firm, the Van Ness Pet Hospital, where his boss Hannibal Sloat "accepts him as human and this he appreciated" (17).

From the description of Isidore's conditions of life and his alienation and estrangement, Dick conveys the unfairness of Isidore's life in a society in which animals, both real and simulations, receive more sympathy and consideration than human beings who, through no fault of their own, suffer social exclusion and economic deprivation in addition to the curse of genetic and mental deterioration from the nuclear fallout. Ironically, the fact of elevating animals to symbols of their owners' social and financial status, but failing to recognise the humanity of survivors like Isidore, reveals the hypocrisy and cruelty that reign in the modern technological society in which humans have become more like the cold indifferent androids they kill for their lack of empathy. For instance, Deckard tells his neighbour about his electric sheep, "I've put as much time and attention into caring for it as I did when it was real ... You feel the same doing it" (11), while his neighbour who owns a real horse says, "You know how people are about not taking care of an animal; they consider it immoral and anti-empathic" (12). In fact, what is immoral is the cruel treatment reserved for specials like Isidore who counts for less than Deckard's mechanical sheep, and this evokes the moral bankruptcy of Dick's imagined post-holocaust society. Moreover, the Voight-Kampff Empathy Test used by the police to

distinguish androids from humans is based on questions related to animals to determine if the persons asked have the appropriate feelings of empathy about the death or cruel treatment of various species of animals and not of humans; any indifference brands one as an android. For example, when Deckard gives the test to Rachael, he tells her about reading a novel written in the old days before the war in which the characters visit a seafood restaurant, and "one of them orders lobster, and the chef drops the lobster into the tub of boiling water while the characters watch" (43).

Despite the unfairness of his life, Isidore is depicted as the novel's most vivid character that metaphors the genuine human feelings and who loves all forms of life, making no distinction between authentic and false, android and human. In this world where specials suffer social exclusion and estrangement, Isidore seeks spiritual release in Mercer's religion through the empathy box by fusing into the collective consciousness formed by the minds of all those who take part in Mercer's struggle and suffering in climbing the hill. For sensitive Isidore, Mercerism is the only thing in this stratified society that tolerates difference and deformity and accepts him in spite of his intellectual incapacity. Dick's description of Isidore's experience of melding is quite notable:

> *The man, Wilbur Mercer, plodded ahead, and, as he clutched the handles, John Isidore gradually experienced a waning of the living room in which he stood; the dilapidated furniture and walls ebbed out and he ceased to experience them at all. He found himself, instead, as always before, entering into the landscape of drab hill, drab sky ... he felt the same old painful, irregular roughness beneath his feet and once again smelled the acrid haze of the sky ... He had crossed over in the usual perplexing fashion; physical merging –accompanied by mental and spiritual identification- with Wilbur Mercer had reoccurred. As it did for everyone who at this moment clutched the handles ... he experienced them, the others, incorporated the babble of their thoughts, heard in his own brain the noise of their many individual existence. They –and he- cared about one thing; this fusion of their mentalities oriented*

> *their attention on the hill, the climb, the need to ascend ... higher, he thought as stones rattled downward under his feet. Today we are higher than yesterday, and tomorrow –he, the compound figure of Wilbur Mercer, glanced up to view the ascent ahead. Impossible to make out the end. Too far. But it would come ... And then, within him, the mutual babble of everyone else in fusion broke the illusion of aloneness ... Isidore stood holding the two handles, experiencing himself as encompassing every other living thing (20-22).*

This passage which portrays Isidore's communion with the empathy box's other users clearly indicates that Dick has predicted the development of virtual reality through a technological device decades before the appearance of cyberspace and the emergence of cyberpunk as a sub-genre in science fiction. In addition, Isidore's fusion with Mercer and his merging with the other users allow him to be close to other people that he cannot achieve in real life because of his status as a "special." Indeed, his ability to "encompass every other living thing" via the empathy box represents the personal intimacy and closeness he is seeking and which he cannot find in the real society that denies his humanness. Isidore tells android Pris,

> *An empathy box is the most personal possession you have! It's an extension of your body; it's the way you stop being alone ... Everybody knows that. Mercer lets people like me ... I almost passed the IQ test. I'm not very special, only moderately; not like some you see. But that's what Mercer doesn't care about (57).*

When Pris moves in Isidore's building, he feels that someone has finally come to this deserted place to share his life and help him forget his loneliness and rejection by society. Although Isidore discovers that Pris, Baty, and Irmgard are androids, he regards them as lonely and frightened and he offers to protect them in his own apartment against bounty hunters:

> *He had an indistinct, glimpsed darkly impression: of something merciless that carried a printed list and a gun, that moved machine-like through the flat, bureaucratic job of killing. A thing without emotions, or even a face ... And so on, until everyone real and alive had been shot (136).*

For this reason, Isidore feels so happy to help the androids and "the potent, strong fragrance of happiness still bloomed in him, the sense of being –for the first time in his dull life- useful. Others depend on me now, he exulted as he trudged down the dust-impacted steps to the level beneath" (174).

Although the three androids treat him badly, calling him a "chickenhead," and have little regard for his feelings, Isidore's attitude and behaviour do not change and it makes little difference to him what the nature of his tormentors is, whether humans or androids. He tells Roy Baty, "What does it matter to me? I mean, I'm a special; they don't treat me very well either, like for instance I can't emigrate" (139). And in reference to Isidore's sympathetic attitude toward them despite their cruel treatment, Irmgard says, "They don't treat him very well either, as he said. And what we did on Mars he isn't interested in; he knows us and he likes us and an emotional acceptance like that –it's everything to him. It's hard for us to grasp that, but it's true" (140). Isidore pays little attention to the androids' coldness and apathy and he thinks "they're still good friends to have" (175), but their behaviour becomes horrifying when they mutilate and maim a spider that Isidore finds outside his apartment. Pris cruelly cuts off four of the spider's legs and Roy Baty "got out a book of matches, lit a match; he held it near the spider, closer and closer, until at last it crept feebly away" (180). While Isidore watches in terror, Pris cuts another leg from the spider, and all at once Isidore pushes her away and lifts up the mutilated creature. He carries it to the sink and "there he drowned it. In him his mind, his hopes, drowned too. As swiftly as the spider" (180-181). At that same moment, the TV revelation that "Mercerism is a swindle" (180) shatters his faith and drives him again into "the tomb world" (183) of decay and death which has haunted him all through his life as a special:

> *The spider is gone; Mercer is gone; he saw the dust and the ruin of the apartment as it lay spreading out everywhere –he heard the kipple coming, the final disorder of all forms, the absence which would win out. It grew around him as he stood holding the empty ceramic cup (181).*

Driven by despair, Isidore calls Mercer for help, and miraculously Mercer appears in a vision telling him that he is really a fraud and giving him the spider with its legs restored.

Like Deckard, Isidore goes through the same experience of violence and destruction in his encounter with the androids, and by day's end they both change incited by anguish and moral suffering as they discover how a human is different from an intelligent machine that is made in his own image. Deckard who represents the pragmatic view of life, suppressing the emotional side that is characteristic of humanity, has his experience reversing his view about killing; he grows into a more ethical and moral man who recognises that killing is a wrong thing, but it is also an inescapable evil in this world, and thereby he cannot stop doing it and ends up with a tortured mind and a shattered consciousness, unable to reconcile what he feels in his heart and what he faces in the complex external world. Isidore, on the other hand, metaphors love and the emotional side of humanity, whose experience with the androids and their cruelty and his discovery of the fraud of Mercerism, in which he strongly believes, do not change his innocence and his humane qualities. Indeed, his descent again into the tomb world of decay and death does bring about the regaining of faith with life which he is able to keep after the appearance of Mercer who brings his spider back to life. After each man has undergone his own experience with androids, Deckard and Isidore meet at last in the three final chapters in which Isidore refuses to help Deckard so he can find the androids he must kill. Deckard is forced to go on "doing wrong" as a killer while Isidore maintains his innocence and his

empathic feeling for all forms and creatures. The two contraries of life, the logical and the emotional, are united, revealing that reason and aggression cannot assure human survival and happiness if humans ignore their qualities of nurture, love, and compassion. Dick uses the mechanical double –androids- as a metaphor to mirror the human being's fragmentation as he ignores the intuitive self and glorifies reason that leads him to identify with the intelligent machines he creates. Angus Taylor points out, "For Dick the android represents the internally alienated human being ... who lives an artificial life because his is withdrawn, unable to establish contact with the 'real' world –the world of human involvement and feeling" (Taylor 1975: 19). So the opposition given in the novel between androids and humans and the attempt to identify androids through the use of the empathy test is not the primary concern of Dick whose essential question is to define the nature of humanity and of humanness and to stress that the whole question of human worth does not rest on easy biological definition or IQ tests.

In *Do Androids*, Dick has reacted against the positivist tradition in science fiction, exemplified by Asimov, that regards the robot as just like humans and he has reversed the message, proclaiming that humans are just like the robot in contemporary society by losing human contact and withdrawing into one-dimensional, mechanical relation to the world and using machines as a substitute to fight reification. For example, the depiction of cruel humans in the novel (Phil Resch, Deckard in the first part, and all those responsible for Isidore's torment) makes the distinction between android and human lose its relevance whereas the question of differentiating between human and inhuman becomes central in the novel. And it is the function of the religion of Mercer that helps separate those who are truly human from those who are not by subjecting them to a test of their empathic

ability through suffering and sharing the suffering of others. In fact, the empathy box is used in the novel as a metaphor of the fusing of individual humans through an empathic concern that creates human solidarity in a world taken over by machines that threaten humankind and even appeal to the last remaining human traits, intuition and empathy. Empathy is considered by Dick the key element defining the authentic human being, and by incorporating the empathy box in the novel, humans like Isidore gain strength by climbing up through the difficulties of their daily lives and free themselves from the prison world of technology they dwell. In his essay "Man, Android, and Machine" (1976), Dick says,

> *A human being without the proper empathy or feeling is the same as an android built so as to lack it ... we mean basically, someone who does not care about the fate which his fellow living creatures fall victim to; he stands detached, a spectator, acting out by his indifference John Donne's theorem that "No man is an island," but giving that theorem a twist: that which is a moral island is not a man (Dick 1976: 56).*

In the same essay, Dick speculates on the subject of machines that challenge humankind:

> *We humans, the warm-faced and tender, with thoughtful eyes –we are perhaps the true machines. And those objective constructs, the natural objects around us and especially the electronic hardware we build, the transmitters and microwave relay stations, the satellites, they may be cloaks for authentic living reality inasmuch as they may participate more fully and in a way obscured to us in the ultimate mind ... Perhaps the closest approximation to truth would be to say: "everything is equally alive, equally free, equally sentient, because everything is not alive or half-alive or dead, but rather lived through (Dick 1976: 62).*

In contrast to Deckard, his wife Iran, the only acting human woman in the novel, is the most empathic and ethical character who sticks to her principles, like Isidore, showing compassion for both humans and androids. At the beginning of the novel, she identifies her husband as "a murderer hired by the cops" who kills "those poor andys" (4), and at the end she is shown willing to care for the false toad brought by

Deckard, ordering "a mixed assortment of artificial crawling and flying bugs" (209) to feed it. Although Iran does not take part in the action of the novel, she is portrayed as a tortured human who undergoes the same experience of anxiety and psychological struggle, not knowing what to do with her life. Like her husband, she relies on the penfield organ to control her mood and feeling. She tells Deckard,

> *When I had the TV sound off, I was in a 382 mood; I had just dialled it. So although I heard the emptiness intellectually, I didn't feel it ... I realized how unhealthy it was, sensing the absence of life, not just in this building but everywhere, and not reacting ... But that used to be considered a sign of mental illness; they called it 'absence of appropriate affect.' ... So I sat down at my mood organ and I experimented. And I finally found a setting for despair... I think that's a reasonable amount of time to feel hopeless about everything, about staying here on Earth after everybody who's smart has emigrated (5).*

But the penfield machine becomes a source of angst and terror for her so that she feels herself a mechanical slave in spite of her freedom to choose the dialled mood. So she rejects the idea of dialling whatever the conditions of her life are:

> *"I can't dial a setting that stimulates my cerebral cortex into wanting to dial! If I don't want to dial, I don't want to dial that most of all ... because wanting to dial is right now the most alien drive I can imagine; I just want to sit here on the bed and stare at the floor." He voice had become sharp with overtones of bleakness as her soul congealed and she ceased to move, as the instinctive, omnipresent film of great weight, of an almost absolute inertia, settled over her (6).*

In spite of Iran's empathic feelings and her desire to see the world change, and while Deckard stumbles off disillusioned to bed after his discovery of the toad's electric nature, Iran does not react and prefers to take care of the toad.

For this reason, Dick never offers a vision of salvation and deliverance from the contradictions of life in the contemporary world, and so the novel presents a series of overlaps between fake and real and tells how Deckard discovers that what he takes to be a real toad is in reality electric and that Resch who seems to be an android turns

out to be a man and Garland who poses as a man turns out to be an android, and it also tells how humans discover that the religion they strongly believe in is a fraud, and that the most popular media religion on Earth is the work of an android. In this world of contradictions and complexities, the value of man is undermined and as Kim Stanley Robinson notes, "it is no longer appropriate to speak of big and little protagonists ... all of the protagonists are now equally powerless" (Robinson 1984: 91). And yet Dick's characters have intense emotional life symbolised by their struggle to assert their humanness and humane nature in a rational mechanised world, and it is through the exploration of the inner space rather than the outer space that Dick gives his characters a psychological depth because of his awareness, as Patricia Warrick says, that, "the greatest pain does not come down from a distant planet, but up from the depth of the human heart" (Warrick 1987: 118). It is this emotional force that has led to the novel's success and has led Carlo Pagetti to call it "the most important, and perhaps overall the most intense among the recent Dick novels" (Pagetti 1975: 29). Dick's exploration of the inner space of his characters also reveals the moral dilemma they experience in order to make the moral choice, but they eventually find themselves powerless without a straightforward answer that will give authenticity and moral dignity to their existence. Patricia Warrick remarks,

> *The Dickian fictional world is a world without Titans or heroes; instead it is a world cut off from the gods. It is filled with little people lacking in power, who daily face the dilemma of trying to survive in the face of the inexplicable destructive forces that constantly try to snuff them out ... The Dickian hero acts. He may writhe and struggle to escape, but in the end he accepts the burden of his existential freedom (Warrick 1987: 196).*

A similar commentary is made by Brian Aldiss and David Wingrove who state that

> *There are no simple solutions for Dick, no easy identifications with all-powerful heroes. His often frail protagonists stand knee-deep in technological kipple, gazing at visions beyond their comprehension. The mood is often one of grey metaphysical comedy (Aldiss and Wingrove 2001: 387).*

Actually, the major characters in Dick's novel are offered deep psychological treatment with such complexity that no other science fiction work of the period can match, and yet their private individual concerns do not seem to have a place of prominence in a mechanised world where all humans share the same concern about identity and the affirmation of their humanness. Deckard fears more about his authenticity and the nature of reality surrounding him whereas he gives little attention to his wife and his family life, and Isidore's personal life is wholly tied to what happens in the post-nuclear wasteland he lives in and his only concern is to escape his fate through his communion with Mercer. So Dick's protagonists represent the two contradictory sides of human nature seeking wholeness and they act as elements in the collective web of humanity haunted by one major concern: the search for identity in a world in which what is real and authentic is both uncertain and constantly changing and in which no one and no authority can be trusted. And as Kim Stanley Robinson observes, "Dick's characters are interesting to us not primarily as individuals, but as members of an extensive network, in constant interaction with each other. When anyone character has to carry the narrative alone, our pleasure in it diminishes" (Robinson 1984: 87).

5.2.3. The Loss of Humanness in Dick's Dystopian World

To explore the important question of how mechanical and android-like the humans are and how the androids become more animate and humanlike, Dick presents a fictional post-holocaust world in which a big transformation of the landscape, both mental and physical, is caused by the nuclear war and the development of sophisticated electronics technologies with high level artificial intelligence. John Isidore is one of the victims of nuclear fallout who is painfully

aware that his intelligence has devolved and his genes have been damaged, and once a bright youth, he is now "hairy, ugly, dirty, stooped, snuggle-toothed and gray. And also he feels sick from the radiation" (68). In despair, Isidore sorely recognises, "A special, a chickenhead ... I can't marry and I can't emigrate and the dust will eventually kill me. I have nothing to offer" (61), and he describes his situation:

> *May be when you deteriorate back down the ladder of evolution as I have, when you sink into the tomb world slough of being a special –well, best to abandon that line of inquiry. Nothing depressed him more than the moments in which he contrasted his current mental powers with what he had formerly possessed. Every day he declined in sagacity and vigor. He and the thousands of other specials throughout Terra, all of them moving toward the ash heap. Turning into living kipple (63).*

Although the holocaust survivors who have chosen to stay on Earth wear a lead shielding (lead codpiece) to protect them from the radiation, there are other humans who are not classed as specials, and yet they are physically affected by the radioactive dust, such as Isidore's boss, Hannibal Sloat, who is described by Isidore:

> *Too old to emigrate, Hannibal Sloat, although not a special, was doomed to creep out his remaining life on Earth. The dust, over the years, had eroded him; it had left his features gray, his thoughts gray; it had shrunk him and made his legs spindly and his gait unsteady. He saw the world through glasses literally dense with dust ... he had accepted the radioactive dirt and it had begun its job, long ago, of burying him. Already it obscured his sight. In the few years he had remaining it would corrupt his other senses until at last only his bird-screech voice would remain, and then that would expire, too (65).*

Dick's description of the effects of radiation on humans is quite notable:

> *Those who could not survive the dust had passed into oblivion years ago, and the dust, weaker now and confronting the strong survivors, only deranged minds and genetic properties. Despite his [Deckard's] lead codpiece the dust – undoubtedly- filtered in and at him, brought him daily its little load of befouling filth. So far, medical checkups taken monthly confirmed him as a regular: a man who could reproduce within the tolerances set by law. Any month, however, the exam by the San Francisco Police Department doctors could reveal otherwise. Continually, new specials came into existence, created out of regulars by the omnipresent dust. The saying currently blabbed by posters, TV ads, and government junk mail, ran: "Emigrate or degenerate! The choice is yours!" Very true, Rick thought (7-8).*

The fatal consequences of this calamitous condition are manifested by the appearance of a socially stratified society in which the outcast specials live on the decaying outskirts of the city and by the development of a vigorous outer space colonisation that has relocated much of the Earth population to Martian colonies that are humanity's real home now.

In addition to the effects of radiation on humans and their social status, Dick projects a dystopian post-war future world in which decay and entropy constantly increase and man depressingly contemplates not only his own death but also the death of the environment surrounding him. Many animal species have become extinct and the few remaining ones are extremely precious to people with the result that they have become a symbol of the social standing of their owners, and mostly striking, humans have developed the same strong attachment and devotion to artificial animals as to real ones. Then Dick portrays the landscape in San Francisco where everything runs down and falls apart, where the destruction of forms proceeds faster than the process of creation; it is in fact the concept of entropy and death that dominates the pessimistic texture of the novel, leading to the prevalence of chaos, uncertainty and loss of faith. Dick has his own term for this process of decay and destruction, kipple, which is explained by Isidore to Pris:

> *Kipple is useless objects like junk mail or match folders after you use the last match or gum wrappers or yesterday's homeopape. When nobody's around, kipple reproduces itself ... Kipple drives nonkipple ... And in these apartments there's been nobody there to fight the kipple. So it has taken over completely ... We can roll the kipple-factor back ... but we can't win ... No one can win against kipple, except temporarily and maybe in one spot, like in my apartment I've sort of created a stasis between the pressure of kipple and nonkipple, for the time being. But eventually I'll die or go away, and then the kipple will again take over. It's a universal principle operating throughout the universe; the entire universe is moving toward a final state of total, absolute kipple-ization (56-57).*

Dick's use of kipple is intended to give a grim and bleak depressing portrait of the cityscape of San Francisco with its dust-filled atmosphere and the debris of daily life that threaten to destroy every aspect of life and to overwhelm the novel's characters and drive them to a slow death. Isidore's place in the suburbs is described as a "deteriorating, blind building of a thousand uninhabited apartments, which like all its counterparts, fell, day by day, into greater entropic ruin" until one day it "would settle into shapelessness, buried under the ubiquity of the dust" (18-19).

In this post-war dystopian world of distress and torment, the development of electronics technology has gained more importance and prominence in the lives of humans who are encouraged to use the different technological devices that allow them to distract themselves and to alleviate their pain and daily suffering. The first indicator of the dominance of technology and its infiltration into the human lives even when it comes to feelings and emotions is the Penfield mood organ, a brain stimulation device that can create selected moods and feelings and on which humans depend as a means of artificial happiness. The mood machine becomes a threat to the very core of human nature, transforming human beings into artificial mechanical objects unable to control their emotional life in spite of their human biological nature. Likewise, the huge progress made in electronics and bioengineering has led to the construction of more sophisticated humanoid robots with high level intelligence that are designed to serve as companions and slaves for the people who choose to immigrate to Martian colonies. The remaining survivors on Earth are continuously encouraged to immigrate with the promise of offering them personal androids to help them live on an alien planet, and it is through the media advertisements that people are constantly reminded of the free offer of the organic

android that is described as "the mobile donkey engine of the colonization program" (15):

> *The TV set shouted, "... Either as body servants or tireless field* hands, *the custom-tailored humanoid robot –designed specifically for YOUR UNIQUE NEEDS, FOR YOU AND YOU ALONE- given to you on your arrival absolutely free, equipped fully, as specified by you before your departure from Earth; this loyal trouble-free companion in the greatest, boldest adventure contrived by man in modern history will provide –"It continued on and on (16).*

However, the androids, that are designed with much superior intelligence, become also dangerous and a threat to humans by killing their masters on Mars and escaping to Earth where they masquerade as humans. Not only do the androids represent a physical danger to humans, but they challenge humankind as they mimic human behaviour so precisely that they can pass as authentic humans, but only as the humans who lack empathy and the genuine human feelings that the androids do not possess. So the android is employed in the novel to mirror the new image of humans who have lost their humanness in the context of modern technology and the post-holocaust wasteland. So the androids become more sentient and more animate (the example of Luba Luft that performs Mozart's opera and admires the paintings of Edvard Munch at the museum), while humans become more like machines, and thereby the distinction between humans and androids goes far beyond the discriminatory man-machine relationship because Dick's central problem in the novel is the loss of the essential traits that characterise humanity which is now capable of producing new life forms which challenge its existence and make the borderline between human and android rather blurred. And as Deckard finally realises, "The electric things have their lives, too. Paltry as those lives are" (208). Besides, the process of dehumanisation in the novel is stressed by the image of Eldon Rosen, the boss of the Rosen Association that produces the androids, who represents

the cruel business leader who runs his enterprise for commercial profit by designing new sophisticated models of androids with advanced artificial intelligence and synthetic memories. Disregarding the dangers his androids pose to humans, Eldon outlines his corporate vision, telling Deckard, "We followed the time-honored principle underlying every commercial venture. If our firm hadn't made these progressively more human types, other firms in the field would have. We knew the risk we were taking when we developed the Nexus-6 brain unit" (47). Deckard eventually realises, upon leaving the Rosen company:

> *Experts ... A mammoth corporation like this –it embodies too much experience. It possesses in fact a sort of group mind. And Eldon and Rachael Rosen consisted of spokesmen for that corporate entity. His mistake, evidently, had been in viewing them as individuals. It was a mistake he would not make again (48).*

In this depressing landscape of technological proliferation, environmental degradation, and commercial manipulations, Dick suggests the possibility of a messiah figure, a saviour who would lead humanity to resurgence and salvation. The strange figure of Wilbur Mercer is presented as the prophet of Earth's most famous religious movement, Mercerism, whose principal function is to hold humanity together through the element of empathy by virtually fusing one's consciousness with that of everyone else through the empathy box. In presenting the figure of Mercer, Dick recalls the Biblical story of Moses, describing Mercer's childhood when "his foster parents ... had found him floating on an inflated rubber air-rescue raft, off the coast of New England" (21). Dick adds to Mercer's sacred status his ability to perform miracles as he "had been able for a time to bring dead animals back as they had been," but his suffering has begun when his ability has been declared illegal because "local law prohibited the time-reversal faculty by which the dead returned to life" (21). Mercer continued to do this secretly until unnamed

assailants “had bombarded the unique nodule which had formed in his brain, had attacked it with radioactive cobalt, and this had plunged him into a different world ... It had been a pit of corpses and dead bones and he had struggled for years to get up from it” (21-22). Mercer calls this horrifying place the tomb world from which he continuously tries to get up by climbing toward the hill’s summit. So Mercer is presented as a Christ-like figure, being persecuted and able to endure suffering, and his media-transmitted religion allows those who believe in him to share his suffering and to attempt to leave the tomb world, seeking resurgence and salvation if ever the summit is reached. However, Mercerism is revealed to be a fraud, the work of a pre-war Hollywood moviemaker named Al Jarry who “did in actuality make a series of short fifteen-minute-video-films for an employer whom he never met ... the ‘rocks’ did consist of rubber-like plastic. The ‘blood’ shed was catsup” (178-179). Then it is discovered that Wilbur Mercer is “merely some bit player” (178) and the world in which he climbs is a cheap Hollywood commonplace sound stage which vanished into kipple years ago. The fake messiah figure has also a double, the popular TV and radio show Buster Friendly and his Friendly Friends, which runs twenty-three hours a day and is presented by Buster Friendly who chats endlessly with glamorous stars and celebrities. Although it is Buster who reveals the breaking news that Mercer is a swindle, Buster himself turns out to be an android, and thereby he is as inauthentic as Mercer. In fact, both movements –one religious and the other cultural- represent the deep sweeping influence of the media on the minds of people, shaping their realities and consciousness; both figures appear only as images via electronic media –TV set and empathy box- and they are never encountered in physical reality. So it is via a technological device that humans are manipulated, and in the process they discover the conspiracy that leads them to realise that the world they inhabit becomes

radically destabilised in the same way as their psychic lives. The wise Isidore, in spite of his devolved intelligence and his strong belief in Mercer, is the one character who seems to be aware of the big conspiracy when he reflects on the matter:

> *Why did Buster Friendly always chip away at Mercerism? No one else seemed bothered by it; even the U.N. approved. And the American and Soviet police had publicly stated that Mercerism reduced crime by making citizens more concerned about the plight of their neighbours. Mankind needs more empathy ... Maybe Buster is jealous, Isidore conjectured. Sure, that would explain it; he and Wilbur Mercer are in competition ... Our minds, Isidore decided. They're fighting for control of our psychic selves; the empathy box on one hand, Buster's guffaws and off-the-cuff jibes on the other (64).*

In this world in which the objective state of affairs is no more stable, in which reality dissolves and humans find themselves unable to affirm their humanness in the face of the destructive forces of a technological society, the individual is unable to remain whole and thus he splits and becomes either schizoid or schizophrenic. Valuing reason above feeling, the schizoid character, represented by Phil Resch and Deckard before his experience with the androids, is the one that is characterised by indifference and emotional coldness and acts as an intelligent logical machine, whereas the schizophrenic responds emotionally to the world around him, and thus he is deeply affected by the contradictions he experiences in society and he is unable to distinguish between reality and illusion. The schizophrenic, like Deckard and Isidore, experiences psychological torment, anxiety, and moral dilemma that may drive him to madness and paranoia in which he experiences visions that appear to him as true reality. It is the case of both Deckard and Isidore who have a vision of Mercer who never appears in reality and in whom they continue to believe even after the discovery of his media artificial trappings, because, for them, Mercer's action is the only remaining hope that sustains them in toiling up for salvation and restoring their humane nature. In the end of the novel, Isidore still believes that "Mercerism

isn't finished" (181), and even Mercer tells him, "They will have trouble understanding why nothing has changed. Because you're still here and I'm still here" (184). Eventually, it becomes clear that the whole concept of Mercerism metaphors the struggle of man for freedom and identity that the "killers," as Dick calls them, are taking away from him; it is the final revealing statement of Iran that outlines Mercer's ideology:

> *It's the curse on us that Mercer talks about ... The killers that found Mercer in his sixteenth year, when they told him he couldn't reverse time and bring things back to life again. So now all he can do is move along with life, going where it goes, to death. And the killers throw the rocks; it's they who're doing it. Still pursuing him. And all of us, actually (208-209).*

Eventually, Mercerism is revealed as a media-created fraud and yet people continue to believe in it; maybe Mercer as a messiah figure is real, after all. In fact, Dick usually creates contradictions and paradoxes in his novels that reflect the distorted world in which humans become uncertain of what is real and authentic, and as Patricia Warrick notes, "In *Do Androids* the reader is spiralled through so many assertions and negations and negations of negations that at the end of the novel he is uncertain of what Dick would have him believe" (Warrick 1987: 129).

In the Dickian world of uncertainty and painful twisting, it is actually the question of the identity of humans which constitutes the thematic centre of the novel which is intended to be a critical allegory of the political, economic, and socio-cultural values of the twentieth century world that strip individual humans of their identity, transforming them into machine-like beings devoid of feeling and driving them to experience psychic disorders and instability. Dick expresses his major concern in the novel in his essay "The Android and the Human" delivered as a speech at the Vancouver Science Fiction Convention in 1972:

> *I would like then to ask this: what is it, in our behaviour, that we can call specifically human? That is special to us as a living species? And what is that, at least up to now, we can consign as merely machine behaviour, or by extension, insect behaviour, or reflex behaviour? And I would include, in this, the kind of pseudo-human behaviour exhibited by what were once living men – creatures who have become instruments, means rather than ends, and hence to me analogues of machines in the bad sense, in the sense that although biological life continues, metabolism goes on, the soul –for lack of a better term- is no longer there or at least no longer active. And such does exist in our world, but the production of such inauthentic human activity has become a science of government and like agencies now. The reduction of humans to mere use –men made into machines, serving a purpose which although "good" in the abstract sense has, for its accomplishment, employed what I regard as the greatest evil imaginable: the placing of what was a free man who laughed and cried and made mistakes and wandered off into foolishness and play a restriction that limits him, despite what he may imagine or think, to the fulfilling of an aim outside of his own personal –however puny-destiny (Dick 1975: 85).*

Given the complexities of the contemporary world, Dick claims that the fact of turning the individual into a machine programmed to perform actions against his will is "the greatest evil imaginable," and therefore the choice is no longer a choice between good and evil as proclaimed in an earlier age. Rick Deckard who grows into a more ethical man and yearns to make the right moral choice finds himself suffering the moral dilemma where he is required to do wrong while struggling to do right. So the Dickian character is the powerless individual who represents all humans in contemporary society who are faced with the tragic fate that they must violate their own human identity and suffer the arduous journey of seeking salvation symbolised in the novel by the upward climb of Wilbur Mercer. Brian Aldiss and David Wingrove refer to the loss of humanness in Dick's fiction, claiming that his work reveals a vision that can be related "not simply to personal psychosis but to the estrangement of technological societies. The response is to the social process of dehumanisation, a process for which the metaphor of machine-man is beautifully suited" (Aldiss and Wingrove 2001: 394).

In this respect, we can state that the central question the novel deals with is not the one directly indicated by the title "Do androids dream of electric sheep?" though the act of dreaming might be an allusion to androids being able to possess human traits (they actually dream of freedom as they kill their masters and escape servitude on Mars). In fact, Dick's humans, not androids, dream of electric sheep and mechanical animals which they define as a symbol of social status, and this reflects the new values of society and the way humans behave in the technological age. Besides, the act of dreaming itself can be viewed as a symbol of hope for humans whose effort must be "to grow beyond the mechanical, unconscious programming within us" (Mackey 1988: 91), and as Patricia Warrick points out, Dick's novel

> *calls up our basic cultural assumptions, requires us to re-examine them, and points out the destructive destination to which they are carrying us. The American Dream may have succeeded as a means of survival in the wilderness of early America; it allowed us to subdue that wilderness and build our holy cities of materialism. But now, the images in Dick's fiction declare, we live in a new kind of wilderness, a wasteland wilderness, because those cities and the culture that built them are in decay. We need a new American Dream to overcome this wasteland. Dick's ubiquitous wasteland landscape is a moral mirror asking us to journey within and explore the universe of mind and psyche where all the forms that shape the outer world are created. The critical journey of discovery is into the mysterious realm of inner space ... the universe in which we live is constructed of our ideas about it. To change it we must change our ideas (Warrick 1987: 195).*

It is this new wilderness in which individual humans suffer shattered consciousness and the trauma of losing human identity that led American writer Art Spiegelman say, "What Franz Kafka was to the first half of the twentieth century, Philip K. Dick is to the second half" (Quoted by Robb 2006: 9), and this view is shared by Jason Vest who draws a parallel between Dick's novel *Do Androids* and Kafka' fiction:

> *The depressing atmosphere, emotionally stunted people, and spiritual weariness recall Kafka's best fiction ... Electric Sheep is a novel heavily indebted to Kafka, as evidenced by Isidore's demeaning occupation and Deckard's pointless concern about social mobility in a world that cares nothing for him (Vest 2007: 11).*

Finally, it is important to note that the future Dick created in *Do Androids*, though it mirrors the breakup of the American Dream relevant in the 1960's socio-cultural context, is actually the one in which humans live now; Dick was writing about it in the 1960's and it has eventually taken shape few decades after his death. Brian Robb sums up Dick's world as

> *A media-manipulated world in which global corporations ride roughshod over ordinary folks, where memory cannot be trusted and moods can be controlled and altered through drugs and technology, where the very 'human-ness' of the person next to you cannot be taken for granted. Was he simply a writer ahead of his time? ... Perhaps our counterfeit world has been a Philip K. Dick novel all along (Robb 2006: 11).*

This vision of reality depicted in *Do Androids* becomes even tougher and more depressing in Dick's following book *Ubik* in which the characters are driven to take refuge in paranoia where the distinction between various levels of reality is the central question.

5.3. *Ubik*: The Reality Breakdown

Ubik was written in 1966 and published by Doubleday in 1969. Since its publication, *Ubik* has come to be seen as the prototypical Dick novel that makes of the reality breakdown the central experience of the narrative, constructing situations in which the point is the impossibility of drawing distinctions between objective reality and various levels of consciousness that constitute alternate realities brought forth by the mind. There was an attempt to adapt *Ubik* into a movie and Dick himself wrote the screenplay in 1974 (published in 1985 as *Ubik: The Screenplay*), but the project has never been made. In 2008, Dick's daughter, Isa Dick Hacket, announced that the adaptation of *Ubik* was scheduled to go into production by Celluloid Dreams in 2009. In 2005, Time magazine selected *Ubik* as one of the one hundred best and greatest English-language novels published since 1923.

5.3.1. Summary

The story of *Ubik* takes place in the North American Confederation in 1992 at a time when space travel and psi powers are commonplace. The novel introduces two corporations that engage in a business war involving the use of psi powers, and the story is told primarily from the point of view of Joe Chip, a debt-ridden technician who works for the Runciter Associates, a prudence organisation (an anti-psi firm), located in New York and headed by Glen Runciter. The organisation employs people called "inertials" with counter talents and with the ability to neutralise and block certain psychic powers for the purpose of securing other people's privacy and businesses. Runciter's main adversary, Ray Hollis, heads another organisation of psychics who use their psionic talents, such as telepathy and precognition, for industrial spying. Glen Runciter is assisted in his work by his wife and former partner Ella who died a decade earlier at the age of twenty and was placed in "cold pac" in a state of half life in a Zurich moratorium. A state of half life is a form of cryonic suspension which is defined as a kind of quick freeze with suspended animation that greatly prolongs the remaining impulses of cephalic activity in those who have just died. A person in half life has limited consciousness and communication ability when revived by technicians, but this ability slowly fades away over time.

The novel opens with Glen Runciter who begins to worry about the future of his business when a number of Hollis's telepaths vanish. Runciter goes to Zurich to consult his wife Ella who is kept in the Beloved Brethren Moratorium owned and directed by Herbert von Vogelsang. Before Ella can advise him what to do, his conversation with her, which is achieved via a wire and headphones allowing him to

access her thoughts, is suddenly interrupted by the intrusion of Jory, a boy who died at fifteen and lies in half life near Ella. In a fit of anger, Runciter leaves Zurich and back in New York, he receives an order for eleven inertials with the mission to nullify a powerful psi field at a research facility on the moon owned by business magnate Stanton Mick. Runciter assembles the best anti-psi agents the company has, including his chief tester Joe Chip and a new employee named Pat Conley whom Joe has recently discovered. Pat is introduced to Joe by G. G. Ashwood, another inertial who asks Joe to test her talent and then she becomes Joe's partner, living in his apartment by paying its rent. Although Joe recognises in his report that Pat is potentially dangerous because she has an unprecedented talent that allows her to change the past and thus determine the future, he eventually recommends her as a new inertial in Runciter's organisation. When Runciter gathers the inertials in his office for the lunar operation, he asks Pat about her talent and she demonstrates by nullifying the lunar mission and making the agreement between Runciter and Stanton's agent non-existent. After Pat brings back the mission, Runciter expresses his suspicion about Stanton's offer because Stanton's agent does not want to reveal the identity of the boss of the lunar facility, but Runciter cannot resist the chance to charge a high fee for his services. Against his initial judgment, he sets out for Luna with his eleven inertials in the newly built spaceship Pratfall II.

When the group lands on Luna, Stanton's agent Zoe Wirt takes them to a meeting room where Joe starts taking psi reading using a polygraph for testing. Mick Stanton arrives and asks Joe to stop his testing, but Joe has already got a reading on the psi field being generated in the vicinity which reveals in the tape excreted by the polygraph that there is no psionic field of any sort to be neutralised. Then, Runciter, Joe and the other inertials discover that they have walked into a trap, presumably set

by the company's main adversary, Ray Hollis. Just as Runciter orders his men to collect their equipments and return to the spaceship to get back to Earth, Stanton, who appears to be a self-destruct humanoid bomb, floats to the ceiling like a balloon and explodes. The bomb explosion apparently kills Glen Runciter without harming his employees who rush him aboard the ship and into cold pack to place him in half life when they reach Earth. As they begin the return journey, Joe reaches for a cigarette and he discovers it is old and stale when it falls apart between his fingers. The deteriorating cigarette is the first of many incidents that engulf the inertials in decay and regression and then death and that direct the novel into a mystery-suspense story. The group begins to experience strange shifts in reality which begin with the cigarette and then a two-year-old obsolete phone book which Joe consults in the ship. When the group lands in Zurich, a helicopter picks up Joe, Al Hammond (another inertial) and Runciter's body and takes them to the moratorium where a group of technicians tries to establish contact with Runciter and place him in half life.

Meanwhile, Joe, deeply affected by the loss of his boss, goes to a coffee shop in the moratorium and tries to buy a coffee, but the machine rejects his money, saying it is obsolete old currency. Joe manages to get Swiss coins, but again he is served old sour cream and even the black coffee is cold and ancient with a scummy mold covering its surface. Waiting for Runciter to be revived to half life, Al suggests to Joe to stay in a hotel in Zurich with Wendy Wright, a female inertial whom Joe loves. Waking up in his hotel room in the morning, Joe picks up the phone to call the moratorium, but he can only hear Runciter's voice on the other end which he cannot understand and thereby he cannot make any call. At this moment, Herbert, the moratorium's owner, comes to take Joe to the moratorium, telling him that his technicians have tried all night to find any cerebral activity in Runciter and they have

not yet succeeded to establish communication with him. When Herbert tells Joe that all the other inertials have left Zurich except the girl who has spent the night with him, Joe is surprised because he has not seen her in the hotel. Looking in the room's big closet, Joe discovers the decayed and dried out body of Wendy in a horrifying state of decomposition. Joe is terrorised and cannot understand the process of deterioration and decay taking place since they have come from Luna, and so he decides to get back to New York without consulting Runciter or Ella.

Joe flies back to New York where he meets the other inertials in the Runciter Associates. In the conference room, Al tells Joe about an advertisement they have found on a match folder about Glen Runciter and the portrait of Runciter on all the money they have instead of that of Walt Disney. Al resolves that maybe Runciter knows what is happening to them and is trying to reach them through these messages. Then Joe and Al decide to go to another town and try to see if a store picked at random will accept the Runciter money. In a supermarket in Baltimore, the money is accepted, but the cigarettes they buy crumble into fragments between their fingers, and in one of the cartons Al finds a note from Runciter which says the situation is desperate and will get more so as time goes on, and yet they should not give up and they need to get in contact with him. Joe and Al become more confused and wonder how far the process of decay can go and what Runciter can do. Then Joe and Al buy a tape recorder and back in New York the firm's shop manager examines it and finds that it is not only worn out, but it is forty years obsolete and is no longer produced these days. In addition, the instruction manual of the recorder says that the product is made by Runciter of Zurich and repair and maintenance are provided by a maintenance station in Des Moines, the town where Runciter was born. Joe and Al try to join the other inertials upstairs and when they reach the elevator Al sees an old

elevator, an open iron cage suspended from a cable about a century old, and asks Joe not to get in. Al begins to feel cold and tired and he goes to the men's room where he finds graffiti on the wall, a message from Runciter telling them that he is alive while all the other inertials are in half life in the moratorium. Al stays alone in the men's room and dies in the same manner as Wendy does.

In the conference room, Joe finds no one of his companions but he sees the TV set featuring out a detergent commercial in which graffiti on the wall of the bathroom is displayed on the screen with the same message from Runciter: All of you are dead. I am alive. After the advertisement, the TV newscaster announces the death of Glen Runciter and the transfer of his body to Des Moines after the failure to revive him, showing pictures of his funeral taking place in his town of birth. Joe is more confused and he turns off the TV set, but it comes back on, showing an advertisement by Runciter about Ubik, a spray can that changes old things into new, bringing them from decay and deterioration back to normal. In the advertisement, Runciter addresses Joe, telling him that he [Runciter] is dead and all that they experience belongs to the process of regression which can be stopped only by spraying Ubik. Runciter urges Joe to go to his apartment and pick the free sample of Ubik sent to him which will keep him going on until he can buy a regular-size can. When Joe gets into his apartment, he discovers that everything has regressed into old age; all appliances and electronic devices in the kitchen and the living room have vanished and other old devices have replaced them as if the procession of growth has ceased and only degeneration and form reversion have taken place. Joe also finds a fresh-looking pre-World War Two magazine, testifying that he and the other inertials witness a shift backward in time and they are in the United States of 1939 at the outbreak of the Second World War. Looking for his mail slot to get the free sample

of Ubik, Joe discovers that it has regressed to an old times mail box placed in the ground level, and when he gets the package he finds that Ubik itself has regressed, becoming a blue glass jar of liver and kidney balm with strange ingredients. Forms continue to devolve around Joe and he senses that he will soon become a decaying, inert heap like Wendy and Al. Joe goes to Runciter's funeral in Des Moines with no clue about whether it is he or Runciter who is alive. Joe drives an old classic car of 1939 to the airport where he tries to trade the car for a flight to Des Moines because his money is considered fake money, and when the airport official and Joe walk to the parking lot, Joe finds that both the car and Ubik have further regressed. Joe is hopeless and he considers suicide by taking the Ubik product, but he immediately receives another cryptic message from Runciter in the form of the inscription on the Ubik bottle telling him to keep trying to find Ubik.

When Joe reaches Des Moines, he finally joins the rest of the group who tell him that they experience the same process of regression and reality shifts and that Edie Dorn, one of the inertials, is missing after she has told them she is sick. They all go to the hotel where they are staying to look for Edie and on the way a policeman stops the car for an infraction and gives Joe a ticket on the back of which there is a message from Runciter which asks him to go to Archer's pharmacy to get Ubik because they are in a much greater danger than ever. At the pharmacy, Joe asks for Ubik which he finds in the form of powder, but he cannot buy it for its high price. On the bottle it is again inscribed that Pat Conley has not tried to use her talent to change the past to help them. Then Joe goes to the hotel where he is told that Edie is found dead and another inertial has also disappeared. Joe suspects Pat of being responsible for all what happens to them because of her destructive powers. When Joe accuses Pat, the hotel lobby blows up in his face. Joe feels tired and in inertia and thinks his

time is up and he tries to go upstairs to his room to lie down and die alone. With pain and difficulty Joe reaches his room where he finds Runciter waiting for him with a can of Ubik. He and Runciter talk, but Runciter is unable to tell Joe everything he wants to know. However, Runciter does confirm that Joe is in cold pack and that he, Runciter, is alive and he is now in the moratorium talking to Joe and that his messages to the group are the result of his attempts to communicate with them while they are in half life. After Runciter sprays the Ubik can all around, Joe feels better and thinks that the process of death can be stopped by Ubik and therefore he must confront the destructive powers and attempt to survive them.

At this point, the action shifts to the Zurich moratorium where Runciter finishes his communication with Joe and tells Herbert that he is exhausted after the arduous and prolonged task of trying to reach Joe, and now he needs to get some rest. In the hotel room, Joe tells Don Denny, one of the inertials, that he has just seen Runciter who has cured him with a spray can of Ubik, and Joe persuades Denny to spray himself with the Ubik left in the can. As soon as Don activates the canister, he disappears into a cloud of spray and then a dirty, evil-looking boy takes his place. The boy introduces himself as Jory, the half-lifer whom Runciter encounters while communicating with Ella, and he claims himself as creator of the regressed world the inertials have occupied since the bomb explosion on Luna. Jory reveals to Joe that he devours the life force of other people in half life to prolong his own existence, and having eaten the others, he is now ready to kill and eat Joe. Jory fastens his great teeth into Joe's hand and begins grinding away. However, Joe escapes by kicking Jory and heals his wound by spraying it with the last of his can of Ubik. As he is still trapped in the world of 1939 to which he and the other inertials have regressed, he goes to look for more Ubik to survive. In the street, he encounters a young girl who

identifies herself as Ella Runciter and who admits that she is the creative power in half life who struggles against Jory's destructive powers. Ella hands Joe a certificate that guarantees him a lifetime supply of Ubik and she suggests going to one of the stores listed on the certificate to get it. Ella leaves Joe at the drugstore and there he once more encounters Jory who has devolved all the Ubik. Joe takes the pasteboard container Jory gives him and calls up all his mental energy to evolve it into a spray can, but he apparently fails. Joe leaves the store and sits on a bench where people wait for a streetcar and there he is approached by a young woman who gives him a can of Ubik, telling him that his mental efforts in the store have brought her from the future -1992- and that if he could do this once, he can do it again. The woman leaves without answering his questions what Ubik is and who invented it. The concluding chapter, only two pages long, provides one clue but more confusing questions. Glen Runciter returns to the moratorium to talk again to Ella, and when the attendant brings her in the consultation lounge, Runciter offers him several fifty-cent coins he collects from his various pockets as a tip. Glancing at the coins, the attendant asks Runciter about the kind of the money on which Runciter discovers the profile of Joe Chip. Runciter can offer no explanation and he wonders what this means, but he has the intuition that the Joe Chip money "was just the beginning."

5.3.2. Dead or Alive Characters

The story of Ubik is told by a third person narrator and it is almost entirely Joe Chip's who is the protagonist and the major view point of the novel while the few sections narrated from Runciter's point of view are included to complicate the events that occur to Joe Chip and the group of inertials. The novel opens with the exposition of two corporations that are engaged in a business war, involving the psi powers that

have become a common commodity in the future world Dick has created. The first character that appears on the scene is Glen Runciter, the boss of the Runciter Associates and the employer of the inertials who share the experience of Joe Chip throughout the narrative. Then, Runciter's inertials appear one after the other, and they are introduced exclusively as professionals with extraordinary psychic talents that can nullify and counter the various psi powers of other agents employed by the company of Ray Hollis. The inertials at the Runciter company are depicted as having no other existence but their names, their physical appearances and the garish costumes they wear, and thus they are undistinguishable the one from the other as far as their personalities are concerned. For example, Tito Apostos is "a bald-headed man, wagging a goatish beard ... He wore old-fashioned, hip-hugging gold lame trousers" (62), Don Denny "wore a polyester dirndl, his long hair in a snood, cowboy chaps with simulated silver stars. And sandals" (62), Sammy Mundo is "a weak-nosed young man, dressed in a maxiskirt, with an undersized, melon-like head" (63), Fred Zafsky is described as "a flabby, big-footed, middle-aged, unnatural-looking individual with pasted-down hair ... clad, for this occasion, in a shift dress the color of a baboon's ass" (64), Edie Dorn is "a girl with glasses and straight lemon-yellow hair, wearing a cowboy hat, black lace mantilla and Bermuda shorts" (56), and Francesca Spanish is a "good-looking, older, dark woman with tricky, deranged eyes who wore a silk sari and nylon obi and bobby socks" (56). When the inertials –six females and five males- enter Runciter's office before their departure for the Luna operation, Runciter seems to be surprised by their strange outward aspects: "He eyed the individuals who had began to fill up his office; they gathered near one another, none of them speaking. They waited for him. What an ill-assorted bunch, he thought pessimistically" (56).

The protagonist Joe Chip appears for the first time in chapter three when G. G. Ashwood, an employee at the Runciter Associates who scouts anti-psi talents, comes to his apartment with Patricia (Pat) Conley asking Joe to assess her talent as an anti-precog. Joe Chip lives alone in an apartment in New York, he is "the company's highly skilled, first-line electrical type tester" (29) who measures the psi-fields and anti-psi talents for the Runciter company. At the beginning of the novel, Chip is depicted as a debt-stricken man who cannot pay his bills for the clean-up robots and he cannot even afford money to make every convenience in his apartment operate, including his front door. Although "Joe gets paid a hell of a lot" and "the firm couldn't operate without him" (29), he suffers an abominable financial situation because he spends much of the money on drugs and amphetamines which keep him going on, like Dick himself whose heavy dependence on drugs while writing caused him his life-long struggle to make ends meet. It is Pat Conley who offers to help him get out of his debt if he writes out a positive evaluation report on her talent to pass her to work as an anti-precog in the Runciter firm. After selecting the inertials fit for the task of blocking the psi infiltration in Mike Stanton's research facility, the story moves abruptly to a sort of a baffling and bewildering puzzle with its mysterious happenings that engulf the protagonist and his companions. At this stage, Dick shifts the emphasis of his work from the personal human concerns of his characters to the central problem of the novel which concerns the nature of reality, and more appropriately the reality breakdown, which becomes the only most important experience Dick's characters share.

The reality breakdown experience begins for Joe and the group of inertials, who apparently survive the Luna explosion, when everything around them begins to devolve and degenerate, giving the impression that the real world they inhabit is

gradually falling apart and giving way to decay and entropy. Vending machines offer clotted cream and ancient cold coffee, the current money becomes obsolete and is no longer accepted by the slot machines and vidphones, and cigarettes become dry and stale and break apart. As a first attempt to understand the meaning of these occurrences, Joe's fellow inertials speculate that the explosion on the moon is the cause when Al Hammond says it is "the bomb blast. The heat," and Wendy announces, "I feel old. I am old; your package of cigarettes is old; we're all old ... because of what has happened" (80). However, their theory is soon thwarted by the appearance of Glen Runciter's cryptic messages on the match folder and in the form of graffiti on the wall of men's urinals at the headquarters of the Runciter Associates and on the bathroom wall in the TV commercial that tells them, "I'm the one that's alive. You're all dead" (127). Besides, Joe and his fellow inertials are thrown into more confusion and bewilderment when Runciter's portrait appears on the money they have and which Don Denny considers "not legitimate issue; the government did not put it out. It's funny money; it's not real" (112). Again, the inertials try to find answers to what they call "manifestations of Runciter" (112) and to find a connective link between them and the process of decay they experience in this new world. Don Denny comes to theorise:

> *That's what they are ... 'manifestations of Runciter' –that's the second process, along with the decay. Some coins get obsolete; others show up with Runciter's portrait or bust on them ... I think these processes are going in opposite directions. One is a going-away, so to speak. A going-out-of-existence. That's process one. The second process is a coming-into-existence. But of something that's never existed before (113).*

Meanwhile, the frightening process of deterioration goes further by threatening the lives of the inertials who begin to die one after the other in a horrifying way that recalls the most dreadful scenes of horror stories. Wendy Wright is the first inertial who dies; Joe discovers her deteriorated body in the hotel room's closet:

> *On the floor of the closet a huddled heap, dehydrated, almost mummified, lay curled up. Decaying shreds of what seemingly had once been cloth covered most of it, as if it had, by degree, over a long period of time, retracted into what remained of its garments. Bending, he [Joe] turned it over. It weighed only a few pounds; at the push of his hand its limbs folded out into thin bony extensions that rustled like paper ... the black cloud of hair obscured its face ... In a strangled voice von Vogelsang rasped, "That's old. Completely dried out. Like it's been here for centuries" ...Joe lifted the cloudy hair away from its face. "It's like it was in a kiln," he said. "At a very high temperature, for a long time." The blast, he thought. The severe heat from the bomb" (105-106).*

Joe reasons that during the night Wendy "had come into the room, and then some process had started in her or around her. She had sensed it and had crept off, hiding herself in the closet, so he wouldn't know ... Maybe it was after trying and failing to wake me, that she crawled into this closet" (106). And yet, Joe, filled with terror, cannot find any connection between what has happened to Wendy and what might possibly happen to everyone in the group and the previous occurrences, including the voice of Runciter he has been the only one to hear on the phone. Joe discards the theory of the bomb explosion as a logical explanation, and then he finds himself completely disoriented with no clues and no correct direction. He thinks that if the explosion consists of a nuclear reaction, then it explains Wendy's death and the dried out cigarettes, "but not the phone book, not the coins, not the corruption of the cream and coffee. Nor did it explain Runciter's voice ... on the hotel room's vidphone ... which ceased when von Vogelsang lifted the receiver" (107). Realising the situation of crisis and torment in which he finds himself, "Joe pondered, trying to control his fear; it had begun now to turn into terror ... Runciter's voice. What did that mean? He saw no underlying pattern, no meaning. Runciter's voice on the vidphone fitted no theory which he could summon up or imagine" (107). Next, Al Hammond feels engulfed in the cold and realises he is dying; he sees a desert of ice and feels a wind across the plain and darkness all around. He thinks:

> *But this is a projection on my part. It isn't the universe which is being entombed by layers of wind, cold, darkness and ice; all this is going on within me, and yet I seem to see it outside. Strange, he thought. Is the whole world inside me? Engulfed by my body? When did that happen? It must be a manifestation of dying, he said to himself. The uncertainty which I feel, the slowing down into entropy –that's the process, and the ice which I see is the result of the success of the process ... All I can make out, he thought, is encroaching darkness and utter loss of heat, a plain which is cooling off, abandoned by its sun (126).*

Joe, who accompanies Al to the men's room, is shocked by what Al experiences before his death; in the darkness of the men's room, Joe tries to switch on the light, but "a blow, feeble and weightless, cuffed his hand in the darkness; terrified, he withdrew his hand, shocked by the impotence of Al's punch. It told him everything. He no longer needed to see" (129).

After Al's death, the events that follow increase Joe's confusion and uncertainty about his existence in this world. Runciter's messages tell him they are all dead and preserved in "cold pac" in a state of half life and only Runciter is alive, while the TV newscaster announces that Runciter's body, after failing to revive him in the moratorium, is transferred to Des Moines where his funeral is to be held. Joe reflects, "This doesn't fit in with the graffiti on the bathroom walls ... Maybe Runciter is dead after all. The TV people think so. They all consider him so, and all we have that says otherwise is the two rhymed couplets, which could have been scrawled by anyone" (133). Suddenly, Runciter appears on the TV screen advertising the spray can of Ubik which appears for the first time in the text, after being encountered in advertisements that serve as epigrams for the novel's chapters. Joe finds himself able to carry on a conversation through TV with Runciter who confirms that he is really dead and he has recorded the commercial about Ubik before his death to help him because he knew about the bomb blast before its happening thanks to his use of

precog talents. Runciter considers the graffiti on the bathroom and the men's room walls "another deterioration phenomenon" (135) and he urges Joe to go and buy a can of Ubik to stop it and to reverse the process of regression and decay he experiences in his supposedly real world. In spite of Runciter's explanation, Joe is no longer sure what to believe and he feels that "Runciter was playing a sardonic game with them, trifling with them, first leading them in one direction, then the other. Emanating either within the living world or the half-life world; or, he thought suddenly, perhaps both" (137). And even the advertisement of Ubik on the TV screen is more confusing because it seems to be addressed, not to the living people but to the half-lifers:

> *One invisible puff-puff whisk of economically priced Ubik banishes compulsive obsessive fears that the entire world is turning into clotted milk, worn-out tape recorders and obsolete iron-cage elevators, plus other, further, as-yet-unglimpsed manifestations of decay. You see, world deterioration of this regressive type is a normal experience of many half-lifers, especially in the early stages when ties to the real reality are still very strong. A sort of lingering universe is retained as a residual charge, experienced as a pseudo environment but highly unstable ... This is particularly true when several memory systems are fused, as in the case of you people. But with today's* new, *more powerful-than-ever Ubik, all this is changed (134).*

So, who is dead and who is alive? What kind of reality does Joe experience? And what is Ubik? Joe realises all at once, "Runciter and Ubik. *Ubiquity*; that's the derivation of the made-up word, the name of Runciter's alleged spray-can product. Which probably did not even exist. It was probably a further hoax, to bewilder them that much more" (137).

When Joe goes to his apartment to get the free sample of Ubik, he finds that both the apartment and Ubik have regressed. In despair, he concludes, "An irony that is just plain too much: the substance created to reverse the regressive change process has itself regressed," and he reflects, "this is insane ... feeling growing, baffled anger.

And a mounting helpless sensation that took root and spread through every part of him. I'm finished, he said to himself" (145). In his apartment, Joe discovers from the fresh-looking newspaper that reality has shifted back to the year 1939, when World War Two has just begun, and then he decides to continue on to Runciter's funeral in Des Moines with no clue whether it is he or Runciter who is alive. He notices that all forms continue to devolve around him at a very high rate, sensing that he himself will soon become a decaying, inert heap like Wendy and Al Hammond. To the New York airport Joe drives a 1939 LaSalle car which has again devolved into a 1929 Modal-A Ford, and he flies to Des Moines in a pre-war Curtiss-Wright biplane. In Des Moines, Joe is able to see Runciter's body in the mortuary:

> *A singed, dehydrated heap of bones lay at one end of the casket, culminating in a paper-like skull that leered up at him, the eyes recessed like dried grapes ... The mysterious change, which had also degraded Wendy Wright and Al, had reached its end ... Had the others in the group seen this? Or had it happened since the services? ... Blinded by tears of fright, he made his way back out of the dust-stricken, silent room (163-164).*

After the services, the inertials begin to disappear and die one after the other, while Joe continues to receive Runciter's messages advising that he should continue his race to buy the can of Ubik before death destroys him. Unable to get the mysterious product, Joe now confronts the entropic powers and attempts to survive them. Indeed, after the blowing up of the hotel lobby in Des Moines, Joe feels the same cold invading him and the loss of strength that have destroyed his comrades. Joe climbs up the stairs to his room, struggling against the destructive forces that he is unable to identify and while labouring upward, like Wilbur Mercer in *Do Androids Dream of Electric Sheep?*, Joe realises that

> *He had become cold as well as exhausted ... They must be wrong about hell, he said to himself. Hell is cold, everything there is cold. The body means weight and heat; now weight is a force which I am succumbing to, and heat, my heat, is slipping away. And, unless I become reborn, it will never return. This is the*

> *destiny of the universe ... It's overtaking me too soon ... Something has hurried this up –some conniving thing has accelerated it, out of malice and curiosity: a polymorphic, perverse agency which likes to watch (186).*

Joe is now certain that

> *He would soon be leaving a trail behind him, bits of crumbled cloth. A trail of debris leading to a hotel room and yearned for isolation. His last labored actions governed by a tropism. An orientation urging him toward death, decay and nonbeing. A dismal alchemy controlled him: culminating in the grave ... that's why Wendy and Al and Edie –and undoubtedly Zafsky by now- deteriorated physically as they died, leaving only a discarded husklike weightless shell, containing nothing, no essence, no juices, no substantial density (184).*

Near death, Joe finally crawls down the hall to the room, helped by "a biological necessity" which he believes is "enough to get [him] up there" (184). In the room Joe is surprised by the presence of Runciter with a can of Ubik that helps Joe to recover, but Runciter's announcement that he is the only one alive and all the inertials are dead in "cold pac" throws Joe again into even deeper confusion without getting satisfactory answers concerning the forces trying to destroy them in half life and the nature of the product called Ubik. Joe tells Runciter,

> *You don't know the answers. That's the problem ... You don't know any more than I do, about what's happening to us and who's attacking us. What is Ubik? You don't know that either. You don't know what it is or why it works. You don't even know where it comes from (195).*

All that Runciter can tell is:

> *I'm not dead, Joe. The graffiti told the truth. You're all in cold pac ... I'm sitting in a consultation lounge at the Beloved Brethren Moratorium. All of you are interwired, on my instruction; kept together as a group. I'm out here trying to reach you ... that's why the manifestations as you call them. For one weak now I've been trying to get you all functioning in half-life, but –it isn't working. You're fading out one by one (194).*

After this encounter with Joe, Runciter appears in the Zurich moratorium trying to have contact with his wife Ella, giving temporarily evidence that Joe is in "cold pac" struggling to save his half life against the destructive force of the other half lifer, the

villainous Jory, who appears to Joe in the hotel room and in the drug-store. Further evidence is given when Joe meets the girl who claims to be Ella and who tries to help him survive the attacks of Jory who "eats" the other half-lifers to extend his own and delay his fading away. Then another woman appears, claiming to have been brought from the future summoned by Joe's mental efforts in the store when he has tried to make the regressed Ubik evolve into a real one. The woman offers Joe a can of Ubik and after she leaves, Joe muses,

> *We are served by organic ghosts who, speaking and writing, pass through this our new environment. Watching, wise, physical ghosts from the full-life world, elements of which have become for us invading but agreeable splinters of a substance that pulsates like a former heart. And of all of them, he thought, thanks to Glen Runciter. In particular. The writer of instructions, labels and notes. Valuable notes (222).*

However, Dick refuses to settle the problem for Joe and for the readers as well; he makes Runciter appear again in the last chapter standing in the moratorium where he discovers with amazement the portrait of Joe Chip on the money he offers as a tip to the moratorium's attendant. So is it Glen Runciter who is in half life, experiencing the same manifestations as Joe does? Or are all the inertials dead, including their boss, experiencing the events of the story together? And more than that, what significance does the concept of half life have in the story and for the charactes?

In fact, critics have written more about the puzzle in ***Ubik*** than about any other aspect in the novel or any other Dick novel, because finding an explanation that reconciles all the events in the story is the only route that leads to drawing a full and clear picture of the characters and understanding their role and status. Although critics have responded variously to the contradictory facts of the story, its complexity, and its confusing ending, there is a consensus that the central experience that Joe and his fellow inertials go through is a reality breakdown experience in

which Joe, as the protagonist of the story, is unable to draw a distinction between reality and illusion. Indeed, he finds himself living in a new world that has shifted back in time with all the concomitant manifestations of regression and decay that lead him to meditate on the nature of this "reality" and to strive to understand what powers have taken over in shaping it. Joe is eventually left with no right direction, unable to find out whether this reality is real or an illusion that Dick presents in the form of half life. In fact, the concept of half life is one of Dick's best metaphors he has used brilliantly in this novel and he has exploited its possibilities to the fullest. The concept is neither unscientific nor Dick's own invention; in reality, during the period when Dick wrote *Ubik,* the legal definition of death had been altered when American physician Robert Ettinger proposed the idea of freezing newly dead bodies through a process called cryopreservation until a cure could be found in the future by using highly advanced medical technology. Ettinger wrote a book in 1962 titled ***The Prospect of Immortality*** in which he argued that death occurs not when the heart stops beating, but when brain activity ceases. According to the new definition that constitutes the premise of cryopreservation, the conditions previously considered to be death such as cardiac arrest and the cessation of blood circulation and breathing can be reversible with medical technology while brain death is irreversible by any physical means. Soon cryonics societies, including the Cryonics Society of California (1966), were established throughout the country to promote freezing newly dead people whose brain activity has not fully stopped. Dick took up the idea and fertilised it with his brilliant imagination, culminating in the possibility of a technology that allows communication between the brains of the frozen persons and those of the living. The result is the appearance of Herbert von Vogelsang's Beloved Brethren Moratorium in ***Ubik*** which has allowed Dick to explore the most important

question of what goes on in the subconscious minds of his frozen characters who have an existence halfway between life and death.

In light of the few clues that Dick provides in the story, in spite of the complexity of the novel's structure and its metaphor, it clearly appears from a careful reading that it is Joe Chip and the other inertials, not Runciter, who are in half life, and Runciter is present in their world as the force of regeneration that tries to help them against the forces of destruction and death represented by Jory. The world of half life the inertials experience while lying in "cold pac" in the moratorium is in fact a metaphor of the subjective reality created by the minds of the characters as in a hallucinatory dream, not realising that this reality is their own and not shared by everyone else, not even by Runciter. The first indicators that reveal the nature of this alternate reality in which the inertials are trapped are the dreams they have and they recount at various points in the course of the narrative. Tippy Jackson dreams of feral twins named Bill and Matt, apparently telepaths employed by Ray Hollis, who tell her, "We're going to get you" (52), Francesca Spanish tells Runciter, "While we waited in your outer office ... someone just now moved us, all of us, into another world. We inhabited it, lived in it, as citizens of it, and then a vast all-encompassing spiritual agency restored us to this, our rightful universe" (62). And when the inertials arrive on Luna, some of them relate various dreams they have had; for example, Francesca recites that

> *A throng of precogs and telepaths descended from a ladder spun of finest natural hemp to the balcony outside my window. They dissolved a passageway through the wall and manifested themselves around my bed ... they quoted poetry and languid prose from old time books (69).*

Tippy Jackson and Tito Apostos say that they have seen the same person named Bill in their dreams, but Francesca insists that what she has experienced "wasn't a dream;

it was an authentic visitation. I can distinguish the difference" (70). Jon Ild, on the other hand, has a dream about hovercars and he says, "I was memorizing their licence-plate numbers. I memorized sixty-five, and I still remember them" (70), and even Ella who is in half life tells Joe that she often seems to share the dreams of those around her in the moratorium and she also dreams of "a smoky red light" (214) that signals she is in a new womb to be born again. And when Runciter talks to her in the beginning of the novel, she reveals, "I've been dreaming all this time ... A lot of my dreams aren't about me at all. Sometimes I'm a man and sometimes a little boy ... and I'm in places I've never seen, doing things that make no sense" (17). Finally, when all the inertials attend Runciter's funeral, Francesca has another dream she calls Ubik dream; she relates, "A great hand came down from the sky, like the arm and hand of God ... the hand was closed and I knew it contained something of value so great that my life and the lives of everyone else on Earth depended on it," and when the hand opens, she sees an aerosol spray can on which "there was one word, great golden letters, glittering; golden fire spelling out UBIK. Nothing else. Just that strange word," but then "the hand closed up again around the spray can and the hand and arm disappeared, drawn back into a sort of gray overcast" (162). By introducing the various dreams of the characters in the plot, Dick provides a key element that unravels the mystery surrounding the nature of the reality the characters live in since the bomb explosion, and thus it becomes clear that the entire narrative is the hallucinatory dream of a man who is unable to distinguish between his subjectively created world and the one presumed to be "objective" or true reality. And this provides evidence, as Douglas Mackey asserts, that

> *There is no "objective" reality irrespective of consciousness: the mind essentially constructs its own world. The shared world we live in is really a compromise, a blend of conflicting subjectivities, which under extraordinary circumstances reveal themselves as fundamentally different (Mackey 1988: 92).*

More than that, the world Dick has created for his characters comes into existence through what Brian Aldiss and David Wingrove call "reality shapers" (387) that constitute a common element in Dick's fiction of the 1960's. The reality shapers that Dick made use of in *Ubik* and in many of his other stories are the drugs that swept the United States during the 1960's, becoming deeply ingrained in the American counterculture movement, and of which Dick himself was a victim, leading him to experience visions and dreams similar to those lived by his characters as he has testified in many of his writings. In *Ubik* Dick has attempted to draw a grim picture of the consequences of drug addiction and to demonstrate the gruesome finis of the 1960's drug culture. Most of the characters in *Ubik* take regularly various types of drugs, including amphetamines and hypnotic and psychedelic drugs, and therefore Dick makes it clear that the alternate reality they live in and the events they experience are induced by their drug consumption, in the same way as their individual dreams. Besides, the technological devices that have invaded every aspect of human life have become another element that creates artificial states of being for humans and shapes their realities. For instance, Tippy Jackson is revealed as having "an electrode planted within her brain" which "stimulated EREM –extremely rapid eye movement- sleep, so while tucked within the percale sheets of her bed she had plenty to do," (51) while Joe Chip is shown as addicted to hypnotic drugs and he cannot sleep without stimulants in spite of having a similar electrode:

> *He had as usual not slept well ... And he had resisted taking a soporific because, very unfortunately, his week's supply of stimulants, provided him by the autonomic pharmacy of his conapt building, had run out –due, admittedly, to his own oral greed ... By law he could not approach the pharmacy for more until next Tuesday. Two days away, two long days (24).*

When the inertials land on the moon, Francesca asks the agent of Mick Stanton if she can get drugs from the tranquilizer-dispensing machines and she tells her comrades,

"When I'm at work I function better if I can get an ergot-base psychedelic drug; it causes me to actually see who I'm up against, and I find that helps" (69). Don Denny asks her, "Since when did you begin to need psychedelic drugs in order to hallucinate? Your whole life's a waking hallucination" (69). Knowing the effects of the hallucinogens, Don Denny replies ironically when Francesca insists that what she has seen is not a dream but a real visitation and she can make the difference, "Sure you can, Francy," and "winked at Joe" (70). Even Runciter is shown taking amphetamines at various occasions, and in the moratorium he asks Herbert if an amphetamine dispenser is available nearby.

Accordingly, the characters whose hallucinatory dream is induced by drugs and artificial means are neither dead nor alive; they are actually halfway between life to which they cling and death against which they struggle to survive. Beyond its use on a literal level in ***Ubik***, the half-life state is in fact the creation of the minds of the characters and it is a metaphor of the human condition in the real world of authentic reality. Actually, Joe and his group of inertials live in an alternate world which they falsely imagine to be true and they experience a reality breakdown where all forms fall apart and the forces of entropy and death take over, but this tragic vision reveals some basic truths and can be attributed to some external collective forces in the modern technological world of the twentieth century and, as Patricia Warrick observes, the power of ***Ubik*** lies in its depiction "of entropy, of a time when things fall apart, when death begins to eat at social structures and at the individuals who live in society" (Warrick 1987: 146). Looking at the modern strife-torn world which had tormented him, Dick said,

> *If two people dream the same dream it ceases to be an illusion, the sole prior test that distinguished reality from hallucination was the consensus gentium, that one other or several others saw it, too. This is the idios kosmos, the*

> *private dream, contrasted to the shared dream of us all, the koinos kosmos. What is new in our time is that we are beginning to see the plastic, trembling quality of the koinos kosmos –which scares us, its insubstantiality- and the more-than-merrier-vapor quality of the hallucination. Like science fiction, a third reality is formed halfway between (Quoted by Warrick 1987: 202).*

In this respect, Joe Chip is everyman in the modern world, his experience is the paranoia everyman shares in this world, and his plight is living in this technological age of extraordinary powers that manipulate the individual man and annihilate his identity.

5.3.3. The Plight of Living in the Modern Technological World

Dick's reality breakdown in *Ubik* and his depiction of the relationship between the protagonist and his experience in the fictive reality are in fact depictions of human existence in a Western technological world ruled by a harsh capitalist system that have led Dick to reflect deeply on the nature of this reality which has inflicted its dwellers with paranoia and insanity, predicting its imminent destruction and falling apart. From the beginning of the novel on, Dick appears so intent on giving every detail possible about a society thoroughly saturated by commodities and technological devices that foreground their ubiquity and their quasi-living status. All the appliances and conveniences in Joe Chip's apartment –coffee-pot, refrigerator, shower, and front door- are animate and coin operated and they demand money for services rendered. The refrigerator asks Joe to put ten cents in the slot to get a carton of milk, saying, "Ten cents, please. Five cents for opening my door; five cents for the cream" (37). And when the front door refuses to open, asking for coins, debt-stricken Joe takes a knife and begins to unscrew the bolt, leading the door to menace him: "'I'll sue you,' the door said as the first screw fell out" (28). Joe claims that the fact of having to pay the door to get out of his apartment is inhumane and he says, "I've

never been sued by a door" (28). In addition, clean-up robots remind Joe of his debts and ask him to pay his entire bill before they come to clean his apartment, while his animate homeopape (a machine that reads and prints the news and Dick introduced in the novel before PCs were common and before the invention of the internet) asks what he wants to read for a specific fee. In shops and supermarkets, autonomic and computerised checkers have replaced humans and TV sets and vidphones have adopted a will of their own, demanding fees for their services. Joe is outraged at the takeover of machines which utterly dominate the commodity structure of a consumer society, and on one occasion when Joe tries to get coffee from the moratorium's coffee shop, a voice comes from the shop's coffee dispenser telling him, "One poscred, please. Or in ten seconds I will notify the police" (87). Joe replies wrathfully,

> *One of these days, people like me will rise up and overthrow you, and the end of tyranny by the homeostatic machine will have arrived. The day of human values and compassion and simple warmth will return, and when that happens someone like myself who has gone through an ordeal and who genuinely needs hot coffee to pick him up and keep him functioning when he has to function will get the hot coffee whether he happens to have a poscred readily available or not (87). (Poscred is a currency created by Dick in the novel)*

Moreover, it is not only that commodities and services make their presence overwhelmingly felt with the prevalence of technology, the world of *Ubik* is also one in which everything is commodified and submitted to the business rule of selling and buying. Pat Conley, who has the tattoo "Caveat emptor" (Latin for 'let the buyer beware') on her arm, makes Joe pass her to work in the Runciter firm by paying a cash sum, and then she tells him, "This will help you with expenses. I couldn't give it to you earlier, before you made your official evaluation on me. You could have cancelled very nearly everything and you would have gone to your grave thinking I had bribed you" (38). In addition, expensive moratoriums are established to maintain

the newly dead in a state of half life and they represent another facet of the commodity structure which has produced a technology to break down even the distinction between life and death, and as Runciter realises, "It is a profitable business, operating a moratorium" (10). Likewise, the most important role in the capitalist system of Dick's fictional world is played by Ray Hollis's firm which is engaged in a business war with Runciter's prudence organisation, making of the psi powers another commodity for commercial profit. Hollis's firm hires precogs and telepaths to provide services for those who seek to infiltrate the lives of other people or to spy on their businesses while the prudence organisations, like Runciter Associates, provide inertials –anti-psi talents- to neutralise unwanted eavesdropping and prognostication, but on a strictly commercial basis. Although Runciter claims he is "a policeman guarding human privacy" and his business is his only "contribution to contemporary civilization" (55), it is made clear that material gain is more valued than any human concern, and this is demonstrated by accepting Mick Stanton's contract in spite of Runciter's suspicions and considering that "this kind of business opportunity happens once in a lifetime" (47). The Zurich moratorium's owner Herbert Vogelsang, who has a business contract with Runciter Associates to nullify psi-infiltration in his moratorium, has doubts about their honesty and truthfulness and he muses:

> *I took their word for it that a telepath got in here; they showed me a graph they had obtained, citing it as a proof. Maybe they faked it, made up the graph in their own labs. And I took their word for it that the telepath left; he came, he left –and I paid two thousand poscreds. Could the prudence organizations be, in fact, rackets? Claiming need for their services when sometimes no need actually exists (13-14).*

Vogelsang also considers that Runciter's visit to his half-lifer wife is pressed by "a business crisis of some sort" (13) and not by any emotional desire to see and talk to

his dead wife he has not visited for two years. Reflecting on this world of a cruel capitalist system where everything is bought and sold, where nothing is certain and no one and no authority can be trusted, Joe Chip realises, "It's a harsh world we're living in; the rule is 'Dog eat dog'" (103).

Then it is not accidental that the text is semantically dominated by Ubik, the universal commercial product and the symbol of the ubiquity of the commodity structure, which appears in the advertisements that serve as epigraphs to each chapter of the novel. For example the epigraph to chapter three reads, "Instant Ubik has all the fresh flavour of just-brewed drip coffee. Your husband will say, Christ, Sally, I used to think your coffee was only so and so. But now, wow! Safe when taken as directed" (23). Among other things, Ubik appears as a razor blade, a brand of beer, a deodorant, a bra, a breakfast cereal, a pill for stomach relief, plastic wrap, a salad dressing, and a detergent. The way these products are advertised reveals that the commercials are parodies of the advertisements of a variety of American products, many of them designed to stop or conceal the effects of entropy in daily life, such as bad breath, perspiration odours, stomach pain, dirt, and deterioration of food. For instance, the advertisement of the plastic wrap says, "It takes more than a bag to seal in food flavour; it takes Ubik plastic wrap –actually four layers in one. Keep freshness in, air and moisture out. Watch this simulated test" (190). The epigraphs exhorting the public to buy the products seem to have no explicit relationship with the narrative, and the Ubik they describe is not the same as the one that eventually appears in the text. The Ubik of the text is a mysterious product in an aerosol can that is identified as the most powerful reality support, capable, when sprayed on, of instantly reversing the process of regression and defeating the forces of destruction

and death. But what is Ubik? In the last chapter, the true identity of Ubik is revealed through the epigraph which says,

> *I am Ubik. Before the universe was, I am. I made the suns. I made the worlds. I created the lives and the places they inhabit; I move them here, I put them there ... I am the word and my name is never spoken, the name which no one knows. I am called Ubik, but that is not my name. I am. I shall always be (223).*

Dick finally identifies this commodity with theological mystery, maybe it is faith, or maybe it is God; Dick has never explained it in his novel or elsewhere. But throughout the narrative, Dick makes Runciter a human embodiment of the spirit of Ubik; he is presented as a manifestation of the force of regeneration in the universe, who "advertises" the mysterious product and makes people aware of its existence, and who is able to come from the "outside" to Joe Chip's world of half life to help him break through the veil of illusion in which only entropy and death prevail.

However, Runciter's force is revealed to be limited when he finds his coins carrying Joe Chip's portrait, indicating, as Hazel Pierce notes, that "Runciter's own regression has begun" (Quoted by Mackey 1988: 94), and even Ubik itself seems to have temporary effect as Joe is required to have a life-supply of Ubik to keep him going on against the destructive forces. In the end, Dick refuses help for Joe Chip and keeps him struggling, as in his climbing the stairs like Wilbur Mercer and his fighting Jory and his racing to find Ubik, because in Dick's own view there is no help and everything Joe has experienced in his subjective reality is what Dick sees as the ultimate finale of modern society and the fate of modern man who dwells in a world of paranoia and lives halfway between life and death. The first clear indication of the destruction of modern society is that money, the universal equivalent of all exchange values, begins to alter its form from carrying the image of Walt Disney (a symbol of a capitalist society dominated by the media) to portraits of the characters

who yearn for a respectable place and role as humans in that society. Later, the backward shift of time and the regression of all forms that the characters experience are characterised by a backward march of all modern technological commodities, whether by the complete disappearance of certain modern facilities which had not existed in earlier times or the regression of some others into old-fashioned conveniences of the pre-World War Two period. For example, Joe finds in his apartment that the homeopape has vanished, his stove has reverted "back to an ancient Buck natural gas model with clogged burners" (138), the refrigerator has turned into "an enormous belt-driven model, a relic that had floated into being from god knew what distant past" (138), the TV set has regressed into an "Atwater-Kent, tuned radio-frequency old-time AM radio, complete with antenna and ground wires" (139), and the coffeepot has undergone "the least change" which Joe considers an improvement because "it lacked the coin slot, operating obviously toll-free" (138). Outside his apartment, Joe witnesses the metamorphoses that have taken place, reverting the entire landscape of modern society into a much simpler and unsophisticated pre-World War Two state; for example, the flying hovercars and sophisticated planes of 1992 are replaced by old-time automobile models and the antiquated Curtis-Wright biplanes, and in the streets Joe can watch the old-time brick and wood buildings and the unornamented shops.

Dick's depiction of the process of regression and degeneration which the characters experience in their hallucinatory dream reflects, in fact, the breakdown and falling apart of the modern capitalist society and its technological commodity structure and a return to earlier periods when humans were not enslaved by machines and when human qualities of love, compassion and honesty were more valued than materialistic interest. Joe realises with terror that "our world declines, turns back

onto itself, bringing to the surface past phases of reality" (123), and that "the procession of forms that normally takes place –that procession ceased ... with nothing subsequent: no newer form, no next stage of what we see as growth, to take its place" (139). And as an evidence that the occurrences witnessed by Joe and his group of inertials are a reflection of the disintegration of the modern society and the failure of technology to create a better world for humanity, Joe is made aware that he has not travelled through time, but it is this real world he sees through his mind, concluding that "We haven't gone anywhere. We're where we've always been. But for some reason –for one of several possible reasons- reality has receded; it's lost its underlying support and it's ebbed back to previous forms. Forms it took fifty-three years ago" (161), and he even stresses that "this originates from within our environment. It has to, because nothing can come in from the outside" (205). In spite of the process of regression and the threat of impending death, Joe seems to find certain positive aspects in this new reality which humans have lost in their real world of 1992. For example, when he drives what he calls "a classic, museum-piece surface car," the LaSalle automobile of 1939, he notices that "with a healthy rumble the engine continued to turn over, and the sound of it pleased him ... this particular regression struck him as an improvement; being completely silent, the transportation of his own time lacked this palpable touch of sturdy realism" (146). And as the car moves up the street, Joe "felt real satisfaction driving it" and "felt within himself a certain measured renewal of optimism" (147). Even the food the inertials have in the hotel is found real and better than the synthetic nutriments of their own time; Don Denny says, "I liked the food. Genuine cowmeat, rather than protein synthetics. Authentic salmon" (168). When Joe reflects on this new reality, he considers the possibility of living in it permanently, wondering, "Is that so bad?" (156), and he

eventually realises, “We know too much to live in this time segment ... In our time we maintain colonies on Mars, on Luna; we’re perfecting workable interstellar flight,” (156) and therefore “we can learn to drive American Austin motorcars ... we can get used to nine-tube screen-grid highboy Philco radios, although that won’t really be necessary” (158). However, Joe abruptly thinks that there is no way they can be accepted by the people of this time because “to them we’re professional agitators, more alien than the Nazis, probably even more of a menace than the Communist Party. We’re the most dangerous agitators that this time segment has yet had to deal with” (159). According to Dick, man of the modern technological society is “a professional agitator”; he is not the ordinary man who suffers from the adverse circumstances in his society, but the professional agitator is everyone in the story responsible for the plight of Joe and his fellow inertials and all humanity. He is Ray Hollis, Mick Stanton, and Jory who have led the characters to become increasingly insane, unable to decipher what seems to be a conspiracy and to identify its perpetrators.

As the narrative progresses, the characters become more and more confused and disoriented while trying to identify the powers of entropy and destruction that trap them. First it seems to be the effect of the bomb blast arranged by Ray Hollis and Mick Stanton, then it is thought that it may be a mysterious joke by Runciter, later Joe seems to be convinced that the psi powers of Pat Conley are responsible, and finally the half lifer Jory is revealed to be the culprit. Yet, Jory, who is made responsible for the death of all the inertials –except Joe- and for the process of regression, does not represent death per se; he is rather a kind of embodiment of the evil force in society that, as Douglas Mackey explains it, “attempts to keep mankind deluded, suspended in a false reality ... that which wants to freeze and extinguish

life" (Mackey 1988: 93). Dick, who believed he was a victim of conspiracies perpetrated by unknown agents in his own life, is unable to identify the true nature of this evil, destructive force in his story and like he suffers himself from paranoia caused by fictive conspiracies and the failures of the technological capitalist society, he eventually creates paranoid characters that dwell in a false world of illusion situated halfway between life and death and reflecting their real condition and existence in the technological age of the twentieth century. In this sense, Carl Freedman states, "If paranoia is an ideology, no modern writer –certainly none since Kafka- has fictionally produced that ideology more rigorously than Philip K. Dick" (Freedman 1995: 15). And in "Man, Android, and Machine," Dick offers his best commentary on *Ubik* which summarises his ideology about the status of man in the modern world:

> *I think we are like the characters in my novel Ubik; we are in a state of half life. We are neither dead nor alive, but preserved in cold storage, waiting to be thawed out. Expressed in the perhaps startlingly familiar terms of the procession of the seasons, this is winter of which I speak; it is winter for our race, and it is winter in Ubik for those in half life. Ice and snow cover our world in layers of accretions. What melts away the rind or layer of frozen ice over the world each year is of course the reappearance of the sun. What melts the ice and snow covering the characters in Ubik, and which halts the cooling-off of the lives, the entropy which they feel is the voice of Mr. Runciter, their former employer, calling to them. The voice of Mr. Runciter is none other than that same voice which each bulb and seed and root in the ground, our ground, hears. It hears: "Wake up! Sleepers awake!" Now I have told you our condition and what Ubik is really about (Dick 1976:59).*

Therefore, it can be evidently stated that Dick's protagonist in *Ubik* does not stand as an individual character with personal concerns and identity; he is every inertial in the story, he is everyman in the modern technological age, and he is Dick himself, who are all caught up in the web of a variety of games, fakes, and reality shifts, culminating in states of uncertainty, depression and paranoia. According to

Carlo Pagetti, *Ubik* can be singled out as "a coherent interpretation of the crisis that troubles the technological man and the American society of the twentieth century," and like all Dick's fiction, its strength "lies in the solid relationship between the individual world of the psyche and the grotesque concreteness of the society, however bizarre and mystified, that engulfs his heroes" (Pagetti 1975: 30). And for Kim Stanley Robinson, who has borrowed Darko Suvin's concept of cognitive estrangement to identify the process of distortion and reality breakdown in the individual psyche of characters, the issue that Dick explores in his novel is that "the estrangements are not a matter of a character's private perception, but are part of a collective experience" (Robinson 1984: 33). Accordingly, Dick's novel *Ubik* in particular and his fiction in general represent the leading example of the critical potential of science fiction, providing a framework within which to question the social structures and human values of the technological age in the Western world and to examine their effects on the psyches of its people. Patricia Warrick expresses this function in Dick's fiction and the form it takes in the following words:

> *Dick may well be one of those creative personalities whom we hail as visionaries. He had a remarkable sense of the cultural transformation taking place in the last half of the twentieth century. He pointed out the cracks in our institutions, our ideologies, and our value systems that would inevitably lead to their collapse. As Dick's fiction declares again and again, the late twentieth century is a time at war with itself, not with an external enemy ... Dick's work makes no new declarations about our time; we knew early in the twentieth century that ours was an age of anxiety. But his gift is to give us the stories that help us see both what we are and what we may become as we move into the Space Age. His novel contribution is the bizarre images he creates that so vividly picture our anxieties. Phantasmagoric shapes ... disorienting images – without clear boundary, inconsistent, contradictory, fragmented, at war with one another. They force us to reconsider our conventional conception of reality (Warrick 1987: 194-195).*

In the same context, Brian Aldiss and David Wingrove make a connective link between all Dick's novels in which they notice that "things are never quite what they

seem. Between life and death lie the many shadow lands of Dick, places of hallucination, perpetual sumps, cloacae of dim half life, paranoid states, tomb worlds and orthodox hells. All his novels are one novel" (Aldiss and Wingrove 2001: 381).

For many of the contradictions and paradoxes he includes in *Ubik* and its unresolved ending, Dick has been widely criticised as lacking competence and violating the traditional conventions of science fiction genre. For example, George Turner writes,

> *My day as a Dick fan is nearly over ... Ubik piles complexity on complexity, until inconsistencies begin to stand out like protest banners. The plotting is neat but cannot override the paradoxes. The metaphor fails because it cannot stand against the weight of reality as we know it (Turner 1975: 47-48).*

Likewise, Kim Stanley Robinson argues,

> *The constructive principle in Ubik is this: for every explanation one can construct for the events of the novel, there will be at least one event that confounds that explanation, making it impossible and thus inoperative. Dick has made certain that no explanation will cover all of the facts (Robinson 1984: 95).*

And he concludes that "Every reader of *Ubik* becomes engaged, just like its characters, in the struggle to create a coherent explanation for the events of the narrative, and like the characters, every reader is eventually defeated" (Robinson 1984: 96). It is utterly true that Dick never provides answers but only puzzles in his novels and that his unheroic characters are depicted as powerless, continuously struggling to find out an answer and to defeat the destructive powers that drag them, temporarily succeeding to hold back the entropic forces, but the encounter with death and entropy seems never to end. In fact, as Dick himself does not have an answer, he allows Joe Chip none in his existence within the alternate world he finds himself in. Indeed, Dick's own life was a long struggle against the powers of the lower world in which depression and paranoia seemed to have caught him in a trap so strong that he

could see no way to escape, turning more and more to drugs, and then he spent the last decade of his career speculating, as he does in *Ubik*, without succeeding to unravel the nature of the mystery that engulfed him. So *Ubik* is a novel of questions about the nature of the entropic and destructive powers in the modern world and how to defeat them that Dick is unable to answer and that can perhaps never find answers elsewhere, and as Patricia Warrick suggests, "Each man must make the intuitive leap to his own answer" (Warrick 1987: 144).

In spite of the negative criticism, Dick has been regarded as the earliest postmodernist writer in the science fiction genre; he wrote about the cloud of chaos that hangs above the world in which doubt and uncertainty grew deeper and the social structures disintegrate further and further. Dick's own gift appears in playing with different levels of reality, different time tracks and consciousness, but never achieving a consistent whole and vision, reflecting the postmodern world of distortion and fragmentation. In *Ubik* the "real" world no longer has a stable status; it is part of a great network that includes contradictory subjective realities and interpenetrating consciousness where it becomes more and more difficult to separate between minds and objective reality, and this causes the whole structure of the novel to be paradoxical. Christopher Palmer notes that Dick's fiction

> *involves a kind of epochal shift from the modern to the postmodern, from the society of production to that of consumption ... In Dick's novels, the reader is absorbed into the situation, moved, and both excited and bewildered. The situation is not always plausible –drastically shifting and unpredictable ... These novels play with the instability of reality –environments that are not what they seem or that dissolve abruptly. This can be seen as postmodern instability ... This is also his most sympathetic and carefully detailed picture of the modern man in a postmodern world, and his most thorough depiction of loss of identity (Palmer 2005: 395-396).*

In addition, Keith Booker remarks that the majority of Dick's fiction contains strong postmodernist elements, "particularly in the way they challenge the polar opposition between fiction and reality. This challenge often takes the form of an exploration of the points of view of schizophrenics, which provides a special form of cognitive estrangement" (Booker 2001: 31). In the same vein, Frederic Jameson asserts that one of the principal experiences of postmodernism that Dick involves in his fiction is the question of what he names "cognitive mapping" in which individual subjects find it more and more difficult to establish a stable sense of their own place amid the growing complexity of the postmodern world (Jameson 1990: 54).

In addition to the postmodernist sensibilities in his fiction, Dick is also regarded as the crucial forerunner of cyberpunk science fiction which is seen by Frederic Jameson as a quintessential form of postmodernist culture and which he declares as "the supreme literary expression if not of postmodernism, then of late capitalism itself" (Jameson 1990: 419). Prior to William Gibson, who has been most widely associated with the subgenre of cyberpunk, Dick was the first among science fiction writers whose narratives explore the inner space –minds- of brutalised populations who inhabit a world of a wildly fecund technology that allows no easy distinction between "true" reality and a virtual one. Sharona Ben-Tov's description of the essence of cyberpunk fiction fits appropriately the world of artificial reality Dick creates in *Ubik*:

> *The cyberpunk story takes place on a dead world –Earth- where nature has been so technologically exploited and ruined that the experience of a natural environment is hardly relevant anymore to human life. It takes place in a world in which global, high-tech corporate capitalism redefines reality as what the market will bear … it's a new world where reality itself might become a manufactured and metered commodity ... The dead, blasted world of cyberpunk narratives may express our worst fears about the direction of the technological system ... If traditional space fiction was a model and symbolic means for*

> *producing space technologies, cyberpunk plays the same role for producing virtual reality, technologies of sensory illusion. Instead of a technological feat like the voyager spacecraft, cyberpunk promises us a chip in the brain to make us think we're on another planet (Ben-Tov 1995: 175, 177).*

And instead of living in a virtual reality in cyberspace through computer networks, Dick promises this false reality in the minds of his characters to reveal the plight of modern man in the technological world of the late twentieth century. It is for this reason that Dick's considerable volume of work has become the prime source for many of the biggest grossing science fiction movies, starting with *Blade Runner* (1982) and going on till the present. With his ideas and concepts put forward into his fiction and his exploration of conflicting levels of reality, Dick is now one of the most sought for writers in the Hollywood industry after his visions about the fate of man in the modern world have entered the popular consciousness along with their own adjective "Phildickian." In fiction as in the cinema, Dick's characters have become exclusive representatives of the modern man whose fate is described by Valerie Broege:

> *There is little doubt that we are entering an age where individual difference and uniqueness will be ground away by the requirements of technology ... Redefinitions of deviance, compounded by new techniques of mind and behaviour control and government penetration into our lives, are moving us toward a therapeutic state ... Perhaps we must admit to the totalitarian nature of our society as it is developing ... we must begin to see ourselves as paid mercenaries and assess the terms of our contacts. Our human feelings as well as our technological talents are being utilized in the dehumanization of others. Our desires for increasing potent technologies, our subjugation of idealism to efficiency, are building a monstrous system of total administration that cancels out man not through terror and brutal authoritarianism but through gradual subjugation in the reasonable name of efficient problem-solving (Broege 1983: 208-109).*

Conclusion

Like in Asimov's and Heinlein's fiction, characterisation in Dick's fiction is also submitted to the conditions of human existence in the fictional worlds Dick has created, revealing basic truths about the modern society and culture. A society of consumption in which drastic and shocking changes have occurred in many aspects of human life in the span of a single lifetime and a society ruled by a cruel capitalist system, overwhelmed by technology, and dominated by evil elites of a corporate structure, is a society that has no place for the individual man who is daily tormented by everything surrounding him, leading him to question the authenticity of the reality he lives in and to experience psychic disturbances and disorders. But unlike Asimov and Heinlein, Dick was the first among science fiction writers to explore what goes on in the minds of characters as a result of the external pressures in the world they inhabit. Human existence in a technological capitalist society and the experience of alienation and breakdown are not new elements in western literature; in fact, they constitute the central subjects in modernist realist literature of the first half of the twentieth century. But the difference between the tales of alienation and psychosis in the realist fiction and those of Dick in science fiction is that in the former the breakdown is essentially a private, individual experience which the reader can decide having no direct relation to him/her. In Dick's work, however, as in most other science fiction tales, the experience is attributed to the external and collective forces in society that have the same effects on all humans, and therefore, the characters represent a collective and shared experience in which human identity is annihilated and the self dissolves.

CONCLUSION

CONCLUSION

In view of the study carried out in this work, it can be observed that the nature of characterisation in post-war American science fiction is closely related to the question of identity which constitutes one of the central issues in modernist and postmodernist fiction. The elements of alienation, estrangement and loss of identity in mainstream literature are usually treated as being subjects of individual concern, dealing with personal problems and conflicts originated by various factors in the modern society, and thus the characters, and mainly the protagonists, are fully developed as round, complex and dynamic personalities that are able to create the plot and hold attention. In science fiction, however, the loss of identity and the annihilation of the self is a collective concern so that man in the highly mechanised, bureaucratised, and repressive society becomes an anonymous figure submitted to the powers of the various institutions and systems that control and determine his behaviour, thought, and status. Since the period of coalescence and definition in the 1930's and 1940's, science fiction has undergone various periods of change that have brought about the growth and consolidation of the genre during the post-war decades. Certainly, the science fiction of the first decades of formation was characterised by almost plotless stories about scientific inventions and space adventures, including encounters with aliens and using futuristic devices with stereotypic characters, particularly scientists and engineers, that act as stock figures for the purpose of placing in the foreground the basic elements that make up the genre. In the 1950's, social satire became one of the modes of expression in science fiction with regard to the political and social tensions of the decade, and in the 1960's the New Wave brought an interest in experimental literary technique and a wider range of subject

material which made it easy to distinguish the earlier kind from the real grown-up science fiction. In the post-war era, science fiction became so loaded with metaphors and thus a powerful instrument of social criticism. Though the fictional worlds created in science fiction stories are not direct representations of the real present world, they are, in fact, distortions with an underlying metaphorical purpose, bringing into question various aspects of the human conditions and situation in an increasingly technological and oppressive society.

In their depiction of future worlds, science fiction writers attempt to extrapolate from the present situation the destiny of humankind with regard to the rapid and continuous developments of technology which are successively gaining in force and the resulting cumulative process of change in every aspect of human existence. In this process of historical change, it is the value and identity of individual man which has been overwhelmed by the collective forces in society that Asimov, Heinlein, and Dick have portrayed in their novels. Isaac Asimov is more concerned with the power of technology in his robot novels in which his characters are representatives of all humanity that is subdued by the force of technological change in their environment. In Heinlein's novels, the power that suppresses identity is not only technological; it is exercised with tyranny and repression by the military, the government, social institutions, and organised religion. Although Heinlein's characters are usually intellectually competent and professionally skilled with a will to change things, to affirm their personal identity, and to restore personal freedom, they are, like other science fiction characters, depicted collectively as representatives of the modern man in a capitalist society, struggling to be humans with individualised personalities and not particles in a network. The loss of identity in Dick's novels becomes a route to paranoia and madness when characters find themselves unable to defeat the powers

of technological progress and the corporate structure of modern society that suffocate them and transform them into objects of trade under the growing capitalist system. In spite of the increased attention given to the depiction of the interior lives and psyches of characters, which was one of the most important contributions made by the New Wave to the development of science fiction, the major concern of characters remains collective, a concern which is related to the place of man in a dehumanising world in which even the question of gender has no longer any importance in the depiction of characters since both male and female become one with no distinguishable traits and interests. Indeed, science fiction characters have no concern of their own and no personal problems and conflicts; the only concern they share is their relation to the world they inhabit and which thwarts feeling and emotion in favour of reason, imposes socially defined thought and behaviour, and makes all persons interchangeable performing functions in a mechanistic way.

Likewise, the characters that represent the different institutions that exercise oppressive and repressive power in society are portrayed as elements in a larger system performing roles by which human individuals are manipulated. These persons are not autonomous individuals with complex personality traits who are capable of determining their own destiny; they are rather representative figures of the social pressures created by the scientific and technological enterprise, the military and political machineries, religious institutions, and corporate economy. And even scientists and engineers, who are supposed to be the agents of progress for human welfare, have been transformed by the force of a collective system into machines that contribute to the consolidation of an inhumane commodified society.

On the other hand, the introduction of non-human characters in science fiction, such as robots, androids and alien creatures, has a metaphorical purpose and represents another element which contributes to the loss of human identity and the dissolution of the self. Robots in Asimov's novels and androids in Dick's stories play upon human fears of the products of technology which enforce the sense that the accelerating technological process and the radical social change have grown strange to human nature and have escaped human control so that individual men and women become more alienated and powerless in the face of mechanistic creatures that threaten to replace the human race and to erode human traits and qualities. Besides, alien creatures, like the "Bugs" in *Starship Troopers,* represent the destructive "other" (the metaphor of the Bugs for Soviet communists demonstrates the effect of the history of the 1950's on the fiction of the period) that can be any other force in the universe that threatens to extinguish humanity. The "other" is not only the communist enemy as in Heinlein's novel; in fact, with the great developments in scientific research and discovery and advancements in space exploration, fears of the unknown and of the mysterious secrets of the universe have increased, leading humans to reconsider their place in the cosmos and to contemplate on their existence in the present and to speculate on their destiny in the future. In this world of conspirational powers, the individual man becomes an anonymous figure in the larger group of the human race, his personal concerns are replaced by the concerns and problems that face all humanity and that cannot be solved at the personal or national levels. Accordingly, the subordination of character to plot and setting in the fictional worlds of science fiction is, in fact, a reflection of the primacy of system over individual in the real world projected into the future, and thus the representation of characters in science fiction can be regarded as an extension of realism expressed

in mainstream literature, and not as a weakness of development or a lack of competence on the part science fiction writers. In this respect, Scott Sanders speaks of the disappearance of character in science fiction narratives and he expresses a pessimistic view about the place of man in the social structure of the technological age:

> *Only when new forms of community arise, which allow for both cooperative living and richness of the self; only when technology is subjected to humane purposes; only when cities are built on a human scale, and when the machineries of government and business are decentralized and the powers which they now exercise are returned to citizens –only then will writers find it easy to imagine complex characters who are at peace with modern society. No one expects that day to come soon; many say it will never come (Sanders 1979: 146).*

More than that, it becomes now clear that the rapid and dizzying technological advancements in new fields of scientific research such as genetic engineering, nanotechnology, and the replacement of human organs with artificial ones, which allow greater manipulations in human organisms through genes and molecules, will have another threatening effect on the existence and destiny of humankind in the future. The problem will not be the question of identity and the dissolution of the self, but it will rather be the disintegration of the human species achieved by technology through such processes as cloning, the creation of hybrid beings of human and mechanical components and the introduction of electronic devices into the human brain. Since the beginning of science and its applications centuries ago, scientists and engineers have constantly promised improvements in the quality of life of humans and greater efficiency in problem-solving, and yet the drawbacks and nuisance of technology have always cast a shadow upon its positive achievements, and the darkest side of technology is yet to come.

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Résumé

La thèse porte sur l'étude des personnages dans la science-fiction américaine de l'après deuxième guerre mondiale à la lumière des grands changements dans le monde moderne et dans les univers fictifs du futur qui ont un effet direct sur le traitement des personnages dans le genre. Le développement et le traitement des personnages de la science-fiction est souvent considéré comme une faiblesse et les écrivains de la science fiction ont généralement été condamnés pour leur négligence de création de personnages complexes avec une profondeur psychologique et les subtilités de la personnalité et de payer plus d'attention aux éléments science-fictifs, comme l'action, le contexte et les thèmes. En adoptant une approche marxiste dans l'étude des romans écrits par les plus brillants des auteurs américains de science-fiction, la thèse tente de démontrer que le roman centré sur le personnage qui a dominé la littérature réaliste depuis le XIXe siècle ne convient plus au genre science fiction qui se préoccupe davantage des différents changements et transformations dans la société et leurs effets sur l'homme et son existence sur terre et dans l'univers plus qu'avec les individus et leurs préoccupations personnelles et leurs problèmes. Après une première partie consacrée à l'histoire de la science fiction en général et de la science-fiction américaine en particulier, la thèse se lance dans l'étude des romans écrits par Isaac Asimov, Robert Heinlein et Philip K. Dick, qui démontre que les personnages sont traités, pas comme des individus avec des identités et des personnalités autonomes, mais en tant que représentants de toute l'humanité qui fait face à diverses pressions dans la société sous la forme de progrès technologiques, organismes gouvernementaux bureaucratiques, les sociétés multinationales et la machine militaire. À cet égard, le travail examine les différents facteurs décrits dans les récits qui constituent les principaux objectifs des écrivains et qui transforment les

personnages en une masse collective qui manque des traits de personnalité individuelle et indépendante, reflétant la condition et l'existence réelle de l'homme dans le monde moderne.

ملخص

تبحث هذه الرسالة عنصر التشخيص في أدب علم الخيال الأمريكي ما بعد الحرب العالمية الثانية في ضوء التغيرات الحاصلة في العالم المعاصر و في عالم أدب الخيال العلمي ، و هي تغيرات تترك أثرها لا محالة في طريقة التعامل مع شخصيات هذا النوع الأدبي. فكثيرا ما أنتقد كتاب هذا النوع الأدبي و اتصفت طريقة تعاملهم مع شخصيات أدب الخيال العلمي بالناقصة لعجزهم في خلق شخصيات ذات بعد سيكولوجي و عمق تحليلي من حيث بنية الشخصية، و لاهتمامهم بالعناصر الأخرى في الرواية- كالحبكة و الموضوع و الإطار الزمني- على حساب التشخيص. و بتبني المنهج الماركسي في دراسة روايات رواد أدب علم الخيال العلمي الأمريكي في الحقبة ما بعد الحرب العالمية الثانية ، نسعى من خلال هذه الرسالة أن نبين أن الرواية في أدب الخيال العلمي لم تعد تعتمد على الشخصية المحورية كما كانت في التيار الواقعي منذ القرن التاسع عشر، حيث بات أدب الخيال العلمي يعنى بالتغيرات و التحولات في المجتمع و أثارها على الإنسان و على وجوده في هذا العالم أكثر مما يعنى بالأفراد و اهتماماتهم الشخصية. و تتناول هذه الرسالة في جزءها الأول تاريخ أدب الخيال العلمي بصفة عامة و أدب الخيال العلمي الأمريكي بصفة خاصة. و أما في جزءها الثاني، فتتطرق لدراسة عينة مختارة من روايات إسحاق اسيموف، روبارت هايلين، و فيليب ك. ديك، و التي تبين أن التشخيص في الرواية لا يولي اهتماما بالشخصيات كأفراد يتصفون بهوية مستقلة و لكن كممثلين لكل البشرية التي تواجه شتى الضغوط في المجتمع في شكل التطور التكنولوجي، الوكالات الحكومية البيروقراطية، الشركات متعددة الجنسيات، المؤسسات العسكرية...الخ. و بالتالي تبحث هذه الرسالة في العوامل المختلفة التي تظهرها سرديات النص و التي تبين في طياتها أن الشخصيات ماهية جماعية تفتقر إلى معالم الشخصية المستقلة و المنفردة و هي بهذا تعكس الظروف الفعلية و الوجود الحقيقي للإنسان في العالم المعاصر.