UNIVERSITY OF CAPE TOWN

DEPARTMENT OF RELIGIOUS STUDIES

Title: FUTURE TENSE: AN ANALYSIS OF SCIENCE FICTION AS SECULAR APOCALYPTIC LITERATURE.

Mary-Anne Thompson
October 1985

Submitted in fulfillment of the requirements for the Degree of Master of Arts to the Faculty of Social Science and Humanities at the University of Cape Town, under the supervision of Dr D S Chidester

TABLE OF CONTENTS

ABSTRACT

Religious apocalyptic literature appears to have been written in response to a situation of crisis in which the believers found themselves. It is the catalyst which provided the energy which the society needed in order to withstand that crisis, and it did this by radically inverting the dimensions which make up a worldview, that is the dimensions of time and space, and the classification of groups, so that it reflects the possibility of a new order, a new heaven and a new earth.

Since the nineteenth century, the Western world has seen itself in a constant state of crisis in terms of the rapid secularisation, industrialisation and urbanisation, and it would seem that the notion of an apocalypse is still relevant. But religious visions of the apocalypse do not seem to have relevance to the largely secular society they would have been addressing. Something new, immediate and drastic was needed, which would supply the society with the energy to withstand the crisis of a secular world.

Science fiction as a literary genre arose in the late nineteenth century, and it would seem as if the new social situation generated a new symbolic vocabulary for ancient apocalyptic themes, in other words, science fiction appeared as an imaginative literary genre of mythic, apocalyptic dimensions to address this situation. In the same way as religious visions of the apocalypse, science fiction inverts the components of a worldview so that a new social order, a new heaven and a new earth are seen as possible.

In order to explore this theme, science fiction is examined in the light of radical inversion of accepted worldviews, and the genre is divided into three historical periods in order to understand the conditions under which it was written, as well as the content of the material involved. These periods are:

1. Apocalypses of Expectation and Hope

The late nineteenth century and the early twentieth century; the beginnings of the genre in the crisis

of rapid industrialisation, secularisation and urbanisation, using the works of Jules Verne and H G Wells.

2. Apocalypses of Irony and Despair

The nineteen twenties to the end of the Second World War; the crises of the two World Wars on a complacent world, using the works of Aldous Huxley and George Orwell.

3. Apocalypses of Destruction and Redemption

The nineteen fifties to the present; the crises of nuclear power and thinking machines, using the works of Frank Herbert and Isaac Asimov.

Also examined are the quasi-religious nature of science fiction, apocalypse as a cleansing agent of the universe, and the myths of noble survivors of post-apocalyptic literature and films. In the light of the above, it can be understood why science fiction can be seen as the functional equivalent to religious apocalyptic myth, but relevant to the largely secular Western world of the twentieth century.

INTRODUCTION

Mircea Eliade, in his book The Sacred and the Profane, has stated that "sacred (that is religious) and profane (that is non-religious or secular) are two modes of being in the world", and that "both sacred and profane modes depend upon the different positions that man has conquered in the cosmos."[1] If we look at the socio-historical development of Western society in this way, it would seem that the social, political and economic conditions of any given time are the main reasons for one mode, either religious or secular, being predominant over another. Since the nineteenth century, the Western world has been undergoing radical changes in terms of the conditions under which the people have been living, and the Western world has seen a gradual shift from a predominantly religious worldview to a predominantly secular one. Science, that is the discovery and codifying of the laws of nature, and technology, that is the using of these laws for industrial purposes in order that man may have greater command over nature and be able to satisfy his needs,[2] are the factors which caused people to look at the world in a secular, rather than a religous light. This being so, traditional, religious

explanations and interpretations of events and developments no longer had the relevance they had had when the population was looking at the world in a religious light. New interpretations were needed.

Eliade, writing in his journal in the early nineteen-sixties, was struck by the symbolic and religious aspects of Jules Verne's book Journey to the Centre of the Earth, in which the adventures of the travellers appeared to have a distinctly religious dimension. He described this as being similar to rites of initiation:

> I'm reading Jules Verne's Journey to the Centre of the Earth and I'm fascinated by the boldness of the symbols, the precision and richness of the images. The adventure is, properly speaking, an initiation and, as in every adventure of this sort, one can find the wanderings through the labyrinth, the descent into the underworld, the crossing of the waters, trial by fire, meetings with monsters, trial by absolute solitude and darkness, and finally the triumphant ascension, which is nothing other than the apotheosis of the initiate.[3]

It is possible to take this further though, and suggest that not only is Verne's work the new interpretation of religious themes, but it is specifically apocalyptic in nature, as it provides new interpretations of the world, through the radical displacement of the elements which make up a traditional worldview. Verne was one of the 'fathers of science fiction' and if his work is specifically apocalyptic, rather than religious in some general sense, science fiction as a literary genre with similar characteristics of displacement as are found in Verne's work, should also be apocalyptic, but in a secular and not religious world.

It would seem essential therefore, to study the literary genre of science fiction in order to understand how the popular imagination has coped with the transition from a religious to a secular worldview, in the face of the radical changes society has undergone over the past century. In examining the characteristics of religious visions of the apocalypse, the conditions under which they were written, and

the role they were supposed to fulfill, we can compare these to science fiction to see if there is any functional similarity, and indeed, if science fiction is apocalyptic literature in a secular setting, and in response to the secular crises of the late nineteenth and the twentieth centuries.

In what follows, I will be examining religious apocalyptic literature and science fiction as a literary genre of the nineteenth and twentieth centuries, in terms of their content as well as the socio-historical developments of the times in which they were written, in order to demonstrate that science fiction can be interpreted as secular apocalyptic literature. It is a study within the history of religions, in the sub-discipline of religion and literature, and the theoretical issue examined is that of persistence and change of symbolic discourse in a historical context. The central problem of the history of religions is that of change and persistence of symbolic forms. In the literary imagination, the secular form is what has changed from the religious, while apocalyptic

is what has persisted. In other words, the nature of society changed from the late nineteenth century through the twentieth in that the popular imagination started seeing the world in a largely secular light. What persisted was the need for an apocalypse; new interpretations of religious visions of the apocalypse were needed to accomodate the changes society was undergoing, in order to make sense of and understand those changes.

FOOTNOTES TO INTRODUCTION

1. Eliade, M; The Sacred and the Profane; the Nature of Religion, translated from the French by William J Trask, New York, Harcourt, Brace and World Inc., 1959, pp 14-15.

2. See Mveng, E; "Cultural Values and the Future of Technology" in Anticipation; Christian Thought in Future Perspective, Geneva, World Council of Churches, No 18, August 1974, pg 9.

3. Eliade, M; No Souvenirs: Journal 1957-1965, Trans. Fred H Johnson Jr, New York, Harper and Row, 1977.

CHAPTER I

APOCALYPSE AND SCIENCE FICTION

1.0 Apocalyptic

Although the word 'apocalyptic' is often associated with fanatical millenarian expectation, the theme of the destruction and re-creation of the cosmos is an extremely widespread religious motif which has occured throughout history in many different religions. The Jewish-Christian apocalyptic is a dualistic type of faith which expresses itself in symbolic visions of the struggle between good and evil, and of the final victory of good. The basic pattern of Christian apocalypse has been outlined by Yonina Talmon: "Christ will reappear in the guise of a warrior, vanquish the devil and hold him prisoner. He will then build the Kingdom of God and reign in person for a thousand years. Those saints who remained steadfast and gave their lives for their faith shall be raised from the dead and serve as his royal priesthood. At the end of this period, Satan will be let loose again for a

short while and will finally be destroyed. The victory will be followed by the general resurrection of the dead, the last judgement, and final redemption."[1] The apocalypse is a response to a situation which is seen as intolerable, and the apocalyptic vision is the means by which the energy needed to withstand the crisis is provided, through the promise of better things to come, that is, the destruction of the old world in order to create a new one, a new heaven and a new earth.

The precise definitions of such terms as 'apocalypse' and 'apocalyptic' have been contested in the academic debate. John Collins has suggested that 'apocalyptic' should be abandoned as a noun, because not all apocalypses, that is not all unveilings, are eschatalogical. This would leave us with 'apocalypse' as a literary genre, 'apocalypticism' as a social ideology, and 'apocalyptic eschatology' or millenarianism, which is a set of ideas and motifs which may also be found in other literary genres and social settings.[2] Even with the definitions provided by Collins, there is still some vagueness as to what is meant by 'apocalyptic'

in the sense that there is no set of motifs or ideas common to all examples of apocalyptic literature. Instead, we should ask whether there is a group of texts which share a significant cluster of traits which distinguishes them from other works. Defining an apocalyptic genre in this manner is far more helpful than trying to find either a set of symbols, or any other ideological content common to all, and it allows us to define an apocalypse as Yonina Talmon has done, as "a genre of revelatory literature with a narrative framework in which a revelation is mediated by an other-worldly being to a human recipient, disclosing a transcendent reality which is both temporal, insofar as it envisages eschatological salvation, and spatial, insofar as it involves another, supernatural world."[3] The dimensions of time and space are vital to the apocalyptic imagination, as they are central dimensions in the formation of a worldview, which is radically altered in an apocalyptic setting. The eschatology in the content is unique. What sets apocalyptic apart from other prophetic works is that there is a clear vision of retribution beyond death;

a promise of a final judgement and destruction of the wicked, or as Talmon has said, "the term is used to characterise religious movements that expect imminent, total, ultimate, this-worldly, collective salvation."[4]

If there is no distinctive apocalyptic eschatology, it can be said that the genre is not constituted by one or more distinctive themes, but by a distinctive combination of elements, all of which can be found elsewhere. Koch has clustered the motifs as follows:

1. Urgent expectation of the end of earthly conditions in the immediate future;
2. the end as a cosmic catastrophe;
3. periodisation and determinism;
4. activity of angels and demons;
5. new salvation, paradisical in character;
6. manifestation of the Kingdom of God;
7. a mediator with royal functions, and;
8. the catchword 'glory'.[5]

Yonina Talmon has listed a slightly different set of characteristics, described as follows:

> The conception of salvation is total in the sense that the new dispensation will bring about not mere improvement but a complete transformation and perfection itself. Millanerian movements also view the impending redemption as ultimate and irrevocable. Time is..... a process that leas to a final future, ... and salvation is imminent, revolutionary, and catastrophic. It is terrestrial and thisworldly, the divine is transcendent and imminent at the same time; the heavenly city is to appear on earth. Thus, the notion of perfect time is accompanied by perfect space. The movements are collective, salvation is to be enjoyed by the faithful as a group, and tend to be ecstatic. Most are messianic; salvation is brought about by a redeemer who is a mediator between the human and the divine. There is also however, another mediator, the Leader, who tends to be charismatic, and is considered to be set apart from ordinary men and endowed with super-natural power.[6]

Both Koch and Talmon provide us with useful tools with which to categorise the genre 'apocalyptic',

and it may therefore be said that a work or a movement might reasonably be called apocalyptic if it shares these conceptual characteristics. It is necessary to go further though, and include the proleptic nature of the eschatological promise and the vital role it plays in religious apocalyptic vision. The essence of religious apocalyptic myth is the promise it involves and the need to act out that promise as if it has already been fulfilled. The promise is of a reversal of the ways of the world, a transcendence of time, space and classification, so that the reversal is seen as not just a remote possibility or something which will happen hundreds of years later, but an immediate one, something which the believers will experience themselves and which will destroy the present unattractive world in order to bring in a new age. The need to act as if the promise has already been fulfilled is of vital importance; this is how apocalyptic myth succeeds in its function. Something is already happening, and if the believers had to wait for it to happen without either being prepared for it, or acting it out, the stagnation would render

it useless. Its immediacy and relevance would be lost. It is this proleptic aspect of the vision which effectively makes the apocalypse happen.

2.0 Worldviews

It is necessary here to examine religion in terms of a worldview. Central to a religion is the embodiment of conscious systems of classification in the formation of a worldview, which Robert Redfield has defined as "the way in a man in a particular society sees himself in relation to all else",[7] and Jeremy Rifkin has defined as "a frame of reference for organising life's activities",[8] adding that throughout history, human beings have felt the need to establish an order to explain the hows and why of daily existence. In other words, a worldview is a 'home base' from which the world is seen in order for it to make sense to the individual experiencing life in that world.

A worldview essentially involves two major dimensions:

1. Spatial and Temporal Orientation

In his discussion of worldviews, Robert Redfield stated that "man is of necessity oriented to a universe of extension and duration."[9] A worldview locates the individual in a temporal continuum, whether linear, cyclical, or in some other pattern, thus overcoming what Mircea Eliade calls "the vertigo brought on by disorientation."[10] Spatial orientation is based on a sense of the centre; some idea of a central axis around which the world revolves, and in relation to which the universe derives its meaning. Spatial and temporal orientation place an individual in a meaningful sense of where he is in relation to the world around him, and when he is, in relation to who has gone before and who will come after him. These orientations confirm the 'rightness' of an individual's life, and through these orientations make him secure in the world and his place in it.

2. Classification of People

A worldview implies groupings of people, some close

> and similar to an individual's self, others remote and different. Classes or categories of people, whether within or outside of the boundaries of a given society are symbolically classified as 'like us' or 'not like us'.[11] Including those 'like us' and excluding those 'not like us' from our lives also confirms the 'correctness' of our existence. In other words, man finds security in the company of his own kind. Religious identity is constructed in the face of 'the other' and there is a fundamental momentum towards either identification or dis-identification with that 'other'.

What then does an apocalyptic promise hold in terms of the dimensions of time and space and the classification of people? The basic function of myth is to overcome unwelcome contradictions between an ideal past or future and a flawed or unsatisfactory present. Apocalyptic vision or apocalyptic myth does this by disrupting the present time and transcending it, so that the future becomes now. It is not simply the promise of a happy, distant future; it becomes that

future through the mythological enactment of that future in the present. Spatially, apocalyptic myth promises displacement, both in terms of creating a new order, a new heaven and a new earth in place of the one occupied illegitimately, and in terms of a reversal in the boundaries of the spatial dimension, in other words, rearranging the 'spiritual geography' of the world. Limits and boundaries will be reversed, the unknown will become the known, the centre will become the periphery, and the periphery the centre. It is the reorganisation of the map; the restructuring of the world to what the believers feel is the correct place they should occupy. For example, the early Christians being persecuted by the Romans saw themselves as becoming the centre of society and the Romans the periphery, which in their view, was the way things should be.

Classification in the apocalyptic genre involves the inversion of groups; 'the first shall be last and the last shall be first', the oppressed will rule and the led will lead. There is a second aspect to classification in a religious worldview, the class-

ification of what is human, what is sub-human, and what is super-human, and the places they occupy in a given society. Animals, for example are usually seen as sub-human, and are therefore treated as such; they are controlled and used according to the needs of society. They are kept in enclosed spaces, fed, killed and eaten, all for the convenience of the people according to the rites of that particular society. Religious worldviews necessarily situate such classifications of human, sub-human and super-human within the framework of a society, and in an apocalyptic setting, the places they occupy may be inverted. Within the Millenarian Cargo Cults for example, animals which had previously been kept in enclosures will be allowed to roam free as if they were not sub-human at all, and their existence will not be at man's whim, or necessarily on his terms. The apocalyptic vision systematically inverts the prevailing order; it displaces the old order through a dramatic mythic replacement of a new order, inverting both the groups and the places they occupy in the world.

3.0 Christian Apocalypse

The best example of Christian Apocalypse is the Revelation of St John the Divine. Without doubt, it presupposes a situation in which believers had experienced suffering and death at the hands of the Romans. This is the crisis in which St John offers the followers his unique message to cope with the situation, not simply salvation and the promise of a happy fate for the martyr in some nebulous, distant future, but an immediate one, 'the time is near'. St John's message was so successful that it was not only preserved, but it continued to be a useful tool of the oppressed throughout the lives of the churches to such an extent that it was given a place in the canon, the only Christian apocalypse to do so.[12] The reason it continued to be of use, when superficially, it failed in rather a spectacular manner to deliver the goods, is precisely because of the proleptic nature of the promise. In other words, the apocalypse did happen, and fulfillment was reached through the mythological enactment of that future in the present.[13]

The apocalyptic myth can be seen as a form of therapy, whose ultimate goal is to transcend the time between a real present and a mythological future, and the myth of the Revelation is the therapeutic device through which the believing community can experience the future as present. In a case as seemingly hopeless as theirs, traditional hopes and promises of the scriptures were not enough; traditional hopes and promises were very much a part of the lives of the early Christians and their faith was constantly being put to the test. Therefore, something new, bigger, and more vital was needed, and in the words of John Gager, "St John offers a Christian myth using as building blocks the full supply of Jewish and Christian symbols, and he structures these symbols so as to reflect the experience of the believers under persecution."[14]

The symbols used by St John are separated into two groups:

1. Symbols of oppression and despair (beasts, plagues, Satan and Babylon), and;

2. Symbols of hope and victory (Lamb, Elders, book of life, New Jerusalem).

There is no middle ground, so possibility of mediation or reconcilliation between the two poles. The category of compromise has no meaning at all in an apocalyptic setting, where good and evil are completely unambiguous and totally opposed. This is symbolically represented in the last of the letters to the seven churches:

> I know your works: you are neither cold nor hot. Would that you were cold or hot! So, because you are luke-warm, and neither cold nor hot, I will spew you out of my mouth.
>
> Rev. 3:15-16

The work is structured into a pattern of sevens and twos, the distribution of which are not, contrary to first impressions, randomly scattered. There is a clear pattern of alternation between them, as Gager has said "like the periodic crests and hollows of a continuous wave," [15] though the pattern is broken at three points; at 6:17 where the opening of the sixth

seal is followed not by the seventh seal, but by a vision of the one hundred and forty-four thousand who bear the seal of God; at 9:21 where the sixth trumpet gives way not to the seventh, but to a dramatic pause in which the final outcome is revealed to St John alone; and finally, at 15:1 where the seven angels with the seven plagues are introduced, but followed immediately by a vision of those who have conquered the beast. By substituting a dynamic for a static relationship between oppression and hope, these breaks in the pattern serve to block the impression that they are permanent, unbearable contradictions.[16] This dynamic, or tension of opposites, is a constant idea in apocalyptic literature and is of vital importance. Central to this is the ultimate dialectic between good and evil, and as long as this dialectic is maintained, the apocalyptic promise still holds and is effective. A static situation has no place in an apocalyptic setting as it implies stagnation, and through stagnation, immediacy and relevance are lost. The proleptic nature of apocalyptic promise is the means or catalyst through which the tension between good and evil is maintained and the promise is effective.

4.0 Millenarian Movements

It is important to recognise that apocalypticism does not simply appear in traditions of sacred literature. Millenarianism was the basic thrust behind those religious movements of Melanesia, classified as 'Cargo Cults'. Just as the Revelation of St John the Divine was a response to a crisis situation, so did the Melanesian Cargo Cults arise out of situations of deprivation, frustration and oppression. They arose as a result of rapid social change and encounters with radically different cultures whose totally foreign value systems were imposed on the people. These new cultures were not understood or accepted. The people, who had governed themselves for centuries and who had strong belief and value systems of their own, were placed in a position of humiliation and submission, and the colonial rulers were seen unconsciously or consciously, as being superior to the natives themselves. These millenarian movements arose out of the need to find a new cultural identity and system of values, as well as a search for dignity and self-respect,[17] and only a total revolution and social upheaval, aided by a transcendent force or forces,

could bring this about.

All Cargo Cults proclaim the imminence of a fabulous era of abundance and blessedness. The fundamental idea is the myth of the triumphal return of the dead, loaded with gifts. For the natives, the arrival of cargo vessels in the white man's ports was a miraculous event. They watched the whites receive provisions and goods in the making of which they had had no part, and their logical conclusion was that the goods had been made by magic or by the ancestors. They also saw the goods as rightfully belonging to them, as it was their magic or their dead which had made them.

When the whites had first arrived, they were seen on the one hand as ancestors who had come to bring them gifts; the fact that their skin was white was important as this was the colour of the spirits, and they were seen as the spirits of the dead who had arrived in ships. On the other hand, once they had become established, the whites behaved like masters; they despised the natives, made them work and tried to convert them to Christianity. In nearly all Cargo Cults the rejection of Christianity is categorical,

though Christian eschatology has contributed to some of the Melanesian mythology in their incorporation of Christ's second coming in their apocalyptic eschatology.

The prophet Tokeriu of Milne Bay, New Guinea, stated in 1893 that a true New Year and a true Feast of the Dead would occur and bring with it the new era of abundance. But before this could happen, a terrifying cataclysm with earthquakes, floods and volcanic eruptions would destroy all infidels, that is, all those who had not joined the cult. After this cosmic catastrophe which was similar to their conception of the end of the world, winds would change and bring good weather, gardens would be full of flowers, fruit and vegetables, and the dead would come in a ship to visit the living and usher in a new era of abundance and blessedness. In addition, adherents of the cult had to abstain from using objects and tools of European origin.

In 1929 and 1930 the myth of the Golden Age spread among the Baining of New Britain. An earthquake was to destroy all Europeans and unbelieving natives,

the mountains would collapse into the valleys to give place to a plain full of gardens and orchards which would not need to be worked, and the dead, including animals such as pigs and dogs, would return to life.

A final example of a Cargo Cult is that of John Frum, who stated that Tana, one of the New Hebrides would be flattened by a cataclysm, the mountains would crumble and fill the valleys, giving place to a fertile plain. (The idea of the mountains crumbling is a popular apocalyptic theme in India and the East). The old would become young again, there would be no more sickness, nobody would have to work the gardens, the whites would leave and John Frum would found schools to replace the mission schools.

Apocalyptic images are clear in the expression of these myths; not only will the social situation be radically altered, but so will the entire cosmos, in other words, inversion of the social order will be accompanied by the inversion of the cosmic order. Yams, potatoes and other roots will grow on trees,

while coconuts and other fruits will grow as roots. Sea creatures will become land creatures and vice versa, or in other words, a reversal of the forms and laws of the present world will occur. The whole cosmos will be renewed; heaven and earth will be destroyed and a new heaven and a new earth will be created.

Peter Worsley said that "the most positive rejection of the present way of life is in the inversion of the existing social order"[18] but equally important is the proleptic enactment of the catastrophe, so that the apocalypse is seen to have occured. The most crucial aspect of Cargo Cults is that the expectation of the catastrophe which will precede the new era is marked by a series of actions expressing an absolute detachment from ordinary values and behaviour. Pigs and cows are slaughtered, all savings spent or thrown away, people stop work and reject everything which is seen as belonging to the European's culture. This is the enactment of the future as if it has already happened; they will have no need for these things in the new world, so in preparation for the new world,

they are discarded.

These religious myths of the apocalypse function in a way which helps the people to cope with an unpleasant time, but they are of little use in a secular world as they are not seen as relevant. The whole significance of the secularisation process is that society does not, in the modern world, derive its values from religious preconceptions.[19] The gallop of scientific progress in the late nineteenth and twentieth centuries has relocated the human worldview from a largely religiously-shaped one to a largely scientifically-shaped one, in which the universe and man's place in the universe have been redefined.

5.0 Secularisation

The modern worldview started to evolve about 400 years ago, and although it has undergone radical modifications, it has retained much of its early vision. It is based on the seventeenth century Newtonian world-machine paradigm.[20] Progress, that is the taming and controlling of the less ordered natural world by man, to

create a more ordered and convenient material one, will result in a better world and science and technology are the tools for getting the job done.

Science has taken the place of religion to the extent that it has shaped human attitudes and ways of understanding the world. This can be illustrated by the displacement of traditional healing rituals by modern medical practice. For example, when a modern man is sick, he will go to a doctor whereas in pre-scientific ages, a cure would have first of all been prayed for, and second of all, would have been tried through a visit to a medicine man with herbal cures which would work in conjunction with the prayers. Now people expect science to cure them and science performs the miracles which used to be attributed to God or some other sacred being, as well as to sacred magic. The cure could be exactly the same; herbs were seen as having sacred properties but could have natural antibodies for a particular illness. A modern doctor could be using a cure based on the same herb or extract, but the difference is in how man perceives that cure to have come about. In the same way, secularisation

has not changed the world; it has changed how humans see the world and respond to it, and science and technology have contributed in a major way towards the secularisation process. In this way, science has taken over the traditional healing properties of religion, but they are both fulfilling the same function and role, so that the only difference is the premises from which they start. In effect then, science and religion can be seen as functionally similar.

The secularisation process is something humanity has done to itself; science and its effects both in material terms and its effect in terms of the increased secularised worldview, are not external agents acting on the world of its own volition. It is an aspect of knowledge which can be socially determined and which is socially valued. Science has helped the world in many ways, but it has not been able to stamp out any problems on a worldwide scale. Poverty, disease, natural disasters and wars still exist, and there is little evidence that science will lead the world to utopia or even solve the majority of its problems. As recently as the nineteen fifties and nineteen

sixties, when science and technology were rising to a peak of discovery and advancement, it was thought that the world only needed about another twenty years for 'the future', as visions of the future were seen to be, to happen.[21] The world's economic boom of the nineteen sixties resulted in the recessions of the seventies and eighties, and this, together with wars and political setbacks, have resulted in a general disillusion with science and technology. Scientific progress and research has been slowed down and in some cases halted, by these factors, and instead of being viewed as the saviours of the world, science and technology have lost much of their original promise. Research is still being carried out, indeed at an incredible rate, but the results of the findings are not being put into practice except in the area of commerce, or more broadly, where commerce is directly affected. The world will simply never have enough money, and humankind will never have enough compassion for their fellow human beings to reach the stage where all people will benefit from the developments of science and utopia will be achieved.[22]

There is little conviction that perfection will ever be achieved or maintained, and the evolution of society is still seen as an endless quest, an unfulfillable myth, involving an intense longing for a new age and a new world. It is precisely this tension between positive and negative, (which can be seen in terms of the destruction of the old world in order to create the new) which is the dynamic characteristic in both science fiction and religious visions of the apocalypse. The ultimate dialectic is promise and fulfillment, and both religious and secular apocalypse opt for the promise. The point is to live that promise in religious apocalyptic myth, because through living or enacting it, the promise is already partially or totally fulfilled. In this way, the dynamic tension between promise and fulfillment is maintained.

6.0 Science Fiction

Science fiction as a literary genre appeared in the late nineteenth century, though it was not identified as a genre in its own right until much later. Michel

Butor has identified three types of science fiction writing:[23]

1. Life in the Future

This type of science fiction story is where the author starts from the world as we know it, introduces certain changes, and tries to foresee or predict both the form of these changes and the consequences thereof. Included in this type are the 'myths of the survivors' of a nuclear holocaust, and examples of authors of the 'life in the future' type are George Orwell, Aldous Huxley and Doris Lessing.

2. Unknown Worlds

These are the "Projections of our dreams"[24] in the words of Michel Butor. Science must allow us to discover domains of reality hidden from us today; planets, galaxies, and forms of alien life. Examples of such writers are H G Wells and Jules Verne. An interesting point to note is

that in nrealy all cases, these worlds are more advanced than our own which makes them more interesting. Journeys to these unknown worlds are journeys into the future. The most obvious exception to this is Jules Verne's Journey to the Centre of the Earth, which is a journey backwards in evolutionary time.

3. Unexpected Visitors

Because visitors from other planets have made the journey to earth and the inhabitants of earth have not been very successful in travelling to other planets, it is obvious that these aliens are from civilisations more advanced than our own. They are more powerful and therefore a threat to humanity on earth. The most famous example of this type of story is H G Wells' War of the War of the Worlds.[25]

Is there any connection, similarity or analogy between religious apocalyptic vision and science fiction literature? Is science fiction the new interpretation of old myths to suit the unpleasant and insecure modern

time, and provide the answer that there are better things to come, or does science fiction fulfill the same function as religious apocalyptic myths in the secular world, and if so, how does it do this? The optimism of the nineteenth and early twentieth centuries has given way to a type of realism: the sky is no longer the limit for the so-called saving powers of science and technology.[26] The fact that the development of the twentieth century has resulted in 1985 as it is, and not as it should be has shattered visions of the limitlessness of the power of science. The need for a new mythology, a secular version of the creation of a new world, was and is, a clear expression of this. Science seems to be a self-conscious attempt to drain the world of the sacred, or de-mystify the world, yet 'scientism' and a 'scientistic' worldview appear to be functionally equivalent to myth. The difference then, is the premises from which they start. Religious apocalyptic myth starts from a largely religious worldview, while secular apocalyptic myth starts from a largely secular worldview, but the end is similar. They are both responses to crises, and they both function in similar ways, and Frithof Capra,

in his book The Tao of Physics makes the point that science is a mystical explanation of the ways of the world.[27] Science therefore, can be seen as the mystical explanation of the modern world, and science fiction as the mythological literature of the modern world, expressly apocalyptic in nature, as it fulfills the same role as religious apocalyptic vision. The visions in science fiction are seen as unfulfillable myths of the nineteenth and twentieth centuries. They are unfulfillable because in the same way as religious apocalyptic vision, the dynamic tension between good and evil, positive and negative, is necessarily maintained in order for that promise to hold and to be effective. Fulfillment of the modern apocalyptic promise also results in decay, and examples of this type of literature can be found in the post-apocalyptic works describing the lives of the survivors of a nuclear holocaust. The intention of science fiction, whether intentionally or unintentionally, was not fulfillment of the promise; it was to provide the energy needed to make sense of the changes the world was undergoing at the time, or in other words, to withstand the crisis of the nineteenth century. Many science fiction works can be seen in fact, as warnings against the fulfillment

of the promise, such as the dystopian novels of George Orwell (Nineteen Eighty Four) and Aldous Huxley (Brave New World). In these works, fulfillment of the promise of a radical change in the ways of the world is not a good thing as the societies are locked in a state of stagnation where the means of attaining an ideal world have become the end. They have lost sight of the goal and the means is all that is left; under conditions such as these there can be no progress, and the dynamism essential to apocalyptic vision is lost. The need for constant movement, an eternal quest for a better world is the most important factor, and is the same thing as the proleptic nature of the promise in religious apocalyptic myth. The promise is still there, a new world is possible, but not in the form of religious apocalyptic vision, that is, the continual quest must be carried out in order for stagnation not to occur.

This creates the irony reflected in many examples of science fiction literature. For example, the myth of progess is encountered in The Time Machine by H G Wells, in which the time traveller is amazed to discover a future which is not more advanced than the present. At first, it seems as if a perfect society has been created,

but this is superficial and on closer inspection and discovery, it is realised that some of the horrors of the nineteenth century have not only not been eliminated, but have in fact deepened and intensified. The Eloi have the intellect of five-year old children, their buildings are in ruins and it seems as if social evils such as poverty and disease have been wiped out, but the ghastly reality of the society of the Morlocks, (even the name is sinister; Mor-lock, or locked in death) is soon discovered by the time-traveller. All the evils of the nineteenth century have been concentrated in these people and their lives; they have been exploited and repressed by the Eloi for centuries, living in darkness underground and being made to work for them. A double irony is introduced here, as the Morlocks are stronger and in reality, are the masters and it is only a matter of time until this is realised and the Eloi are conquered. H G Wells seemed to be suggesting that the logical outcome of perfect society is decadence as there is nothing to strive for. This is a warning against the fulfillment of the promise of science; that man must not cease to look critically at the present. Wells noted that "energy in security takes to art and to eroticism, and then come languor and decay",[28] This

illustrates the tension between promise and fulfillment by showing that if the tension is lost, and humanity stops looking critically at the world, evils will not be eliminated, they will be intensified.

As already mentioned, the basic function of myth is to overcome unwelcome contradictions between an ideal past or future and a flawed or unsatisfactory present. In religious apocalyptic myth the enactment of the ideal future or past is the most important aspect, while in secular apocalyptic myth it is the quest towards that fulfillment which is important, in other words, constant movement is essential. These are functionally the same thing as their goal, that is, a new heaven and a new earth are the same. Both are active responses to an unsatisfactory world, and both use myth and symbolic form to create the energy needed in order to withstand the crisis the society feels it is undergoing. Science fiction as secular apocalyptic literature transcends the dimensions of time and space and the classification of groups in a functionally similar way to religious apocalyptic myth, and indeed, they are doing functionally similar things. Religious

apocalyptic myth is effective in a society with a predominantly religious worldview, but its relevance and meaning are largely lost in a secular society. Both religious visions of the apocalypse and science fiction are responses to a crisis situation which is seen to be intolerable, and both use a similar 'recipe' for overcoming their particular crises, that is, both invert the crucial aspects which make up their world-views in order for a radical change in the ways of the world to take place.

I intend in the following chapers to explore this theme further, using as examples writers of science fiction chosen for the period of time in which they wrote, as much as for the content of the material. Science fiction is as much a reflection of the political, economic and social events of the time in which it is written, as it is a reflection of the stage of scientific development reached. I have divided the genre into three historical periods for this purpose:

1. Apocalypses of Expectation and Hope

The late nineteenth century and the early twentieth century, or the beginnings of the genre, and for this period the writers chosen are Jules Verne and H G Wells.

2. Apocalypses of Irony and Despair

The nineteen-twenties to the Second World War, or the pre-nuclear and nuclear ages, using the works of Aldous Huxley and George Orwell.

3. Apocalypses of Destruction and Redemption

The nineteen-fifties to the present, or the post-nuclear age, using the works of Frank Herbert and Isaac Asimov.

The nineteenth and twentieth centuries have, in the West, been times of social, political and economic upheaval, similar to the crises under which religious visions of the apocalypse were written. The desire

for a new world, a new heaven and a new earth still existed, an apocalypse was still sought. Something new was needed though, something relevant to the largely secular world of the time. Science fiction appealed to the popular imagination as providing the functional equivalent to religious apocalyptic myth, in order that the populations could make sense of the changes which were occuring in society at the time, and so that the crises of the modern world could be weathered.

FOOTNOTES TO CHAPTER I

1. Talmon, Y; "Millenarism", in David Sills (ed) International Encylopedia of the Social Sciences, Vol 10, London, MacMillan, 1968, pg 349.

2. Collins, J; The Apocalyptic Imagination: An Introduction to the Jewish Matrix of Christianity, New York, Crossroad, 1983, pg 4.
see also
Koch, K; The Rediscovery of the Apocalyptic, London, SCM Press, 1972.

3. Talmon, Y; Ibid, pg 351

4. Talmon, Y; Ibid, pg 349.
See also
Talmon, Y; "The Pursuit of the Millenium: The Relation between Religious and Social Change", in Lessa, W and Vogt, E; (eds) Reader in Comparative Religion; an Anthropological Approach, 2nd edition, New York, Harper and Row, 1966, ppp 522-537.

5. Koch, K; Ibid, pp 28-33

6. Talmon, Y; "Millenarism", Ibid, pp 351-352.

7. Redfield, R; "The Primitive Worldview" Proceedings of the American Philosophical Society, no 94, 1952, pp 30-36.

8. Rifkin, J, with Howard, T; Entropy, A New Worldview, New York, Bantam Books, 1981, pg 5.

9. Redfield, R; Human Nature and the Study of Society: The Papers of Robert Redfield, Volume 1, Chicago, University of Chicago Press, 1963, pg 272.

10. Eliade, M; A History of Religious Ideas, Vol 1, trans. W R Trask, Chicago, University of Chicago Press, 1978, pg 3.

11. Redfield, R; "Ethnic Relations: Primitive and Civilized", in Jitsuichi, Masuoka and Preston Valen (eds) Race Relations, Problems and Theory, Chapel Hill, University of North Carolina Press, 1961, pg 92.

12. Other examples such as the Apocalypse of St Peter were omitted. See Gager, J; Kingdom and Community; The Social World of Early Christianity, New York, Prentice-Hall, 1975, pg 53.

13. Barr, D, "The Apocalypse as a Symbolic Transformation of the World: A Literary Analysis", in Interpretation, Vol 10, 1985, pp 39-40.

14. Gager, J; Ibid, pg 52.

15. Gager, J; Ibid, pg 52.

16. See Gager, J; Ibid, pp 51-55.

17. Eliade, M; The Two and the One, trans. J M Cohen, Chicago, University of Chicago Press, 1965, pp 128 -148.

see also

Cohn, N; The Pursuit of the Millenium, New York, Harper and Row, 1957.

18. Worsley, P; The Trumpet Shall Sound: A Study of Cargo Cults in Melanesia, London, 1957, pg 251.

19. See Wilson, B; "Religion in Secular Societies", in Roland Robertson (ed) Sociology of Religion, Harmondsworth, Penguin, 1972, pp 152-162.

20. Rifkin, J, with Horward, T; Entropy, Ibid, pp 13-19.

21. Birch, L; "Science Looks Within Itself and Turns Outwards", in Anticipation: Christian Social Thought in Future Perspective, Geneva, World Council of Churches, no 10, Feb 1972, pp 3-11.

See also

22. Glass, B; "The Future of Science - Endless Horizons or The Golden Age?", in Anticipation, Ibid, pp 12-16.

23. Butor, M; "The Crisis in the Growth of Science Fiction", in R Howard (ed) Inventory, London, Jonathan Cape, 1970, pp 225-228.

23. Butor, M; Ibid, pg 228.

24. Butor, M; Ibid, pg 226.

25. Butor, M; Ibid, pg 228.

26. See Ul Haq, M; "The Crisis in Development Strategies", in Anticipation, Ibid, No 12, 1972, Pg 3-8.

27. Capra, F; The Tao of Physics: An Exploration of the Parallels between Modern Physics and Eastern Mysticism, London, Wildwood House, 1975.

28. Wells, H G; Preface to a collection of his own works, published by William Heinemann, London, 1933. Reprinted 9th edition, 1983.

CHAPTER II

APOCALYPSES OF EXPECTATION AND HOPE: JULES VERNE AND H G WELLS

In Chapter I we saw that Jewish-Christian and even Melanesian apocalyptic emerged out of a dualism which expressed itself in symbolic visions of the struggle between good and evil, in anticipation of the final victory of good. We saw that this was a response to an intolerable situation; the apocalyptic vision was the means by which the energy needed to withstand the crisis was provided; and we have seen that apocalyptic myth succeeds in its function through the believers acting out the promise as if it had already been fulfilled in religious apocalyptic, and in this way, it was fulfilled.

1.0 Apocalyptic Crisis

The important word here, the word which distinguishes apocalyptic from other literary genres, is 'crisis'. Since the late nineteenth century the Western world

has seen itself as being in the great age of crisis: a crisis of technology, a crisis of military power, and a crisis of culture. These crises have been perceived as more worrying, different and somehow worse than all the crises the world has been through in the past. Implicit in this is society's historical position. The changes the world has been through since the second half of the nineteenth century through to the present have been of such a nature that the West has constantly perceived itself as being at the end of a epoch, or in the words of Frank Kermode "it is the peculiarity of the imagination that it is always at the end of an era".[1] Kermode felt that this sense of always being at the end of an era, or 'fin de siecle' phenomonen, was more evident at the end of the nineteenth century than at any other time. The second half of the century gained momentum in terms of 'progress' at an astounding rate, and the people were carried along with this momentum which was represented as a feeling of perpetual crisis, revealed in a pervasive sense that the end was at hand.

It has been said that the nineteenth century really ended in 1914, but the end of an epoch can be measured in different ways. In retrospect, it is easy to label history according to events, and to put meanings and explanations on to these events. 1914 is an obvious choice for the end of the nineteenth century, but other years qualify just as well. For example, the year 1900, besides being the final year of the century in chronological terms, was significant in other ways as well; Nietzche died; Freud published The Interpretation of Dreams; Russell published The Critical Exposition of the Philosophy of Liebniz; and Planck published his quantum hypothesis. What is also significant is that out of the end of the century grew new beginnings - thoughts and ideas were being transformed and worldviews were being challenged, all of which served as satisfying confirmations of the rightness of the patterns human beings impose on the world retrospectively. After all, crisis is a way of thinking about the moment, and not inherent in the moment itself. This is similar to a so-called 'primitive' man who reveres a sacred stone; the stone is revered because it is sacred, not because it is a stone, and

its sacredness has been imposed on it by man. In the same way, patterns and meanings are attached to developments and occurences as being somehow 'significant', if they fit the purposes and suit the theories of society.

But what happened in the second half of the nineteenth century that changed the way man viewed the world as well as his place in it, that so revolutionised society that the time was seen as 'critical'? By the 1860's through to the end of the century the idea of progress, that is, the idea that things had changed for the better and would go on changing, was universally agreed upon.[2] The very word 'progress' implies improvement, not just change, because the opposite word is 'retrogress which actually means to slide backwards to a worse state. The second phase of industrialisation in Britain which lasted from 1840 to 1895, was largely responsible for the turmoil and upheaval of the time.[3]

The first phase of industrialisation, that of the textile industries had reached its limits and the second, based on coal, iron and steel, took over and changed the face of Britain as it had never been

changed before, the biggest change being the introduction of the railways.

Between 1830 and 1850, about 6 000 miles of railways were opened in Britain and these transformed not only the speed of travel, but also the way in which the people of Britain saw their country. Eric Hobsbawm has said that

> it (the railway network) revealed the possibilities of technological progress as nothing else had done, because it was both more advanced than most other forms of technical activity and omnipresent..... (The railways') organisation and methods were on a scale unparalled in any other industry, their use of novel and science-based technology (such as the electrical telegraph) unprecedented. They appeared to be several generations ahead of the rest of the economy, and indeed, 'railway' became a sort of synonym for ultra-modernity..... as 'atomic' was to be after the Second World War. Their sheer size and scale staggered the imagination and dwarfed the most gigantic public works of the past.[4]

It would seem therefore, that industrialisation and

urbanisation themselves, re-ordered the structure of Britain; through the mechanisation of labour, the railways and the new structure of urban life, notions of time and space were re-ordered but not explained. The events themselves did not carry inbuilt explanations and it would seem that a new literature was needed; one which would make sense of the changes and put them into some sort of perspective; one that would make the subtle technological re-orientation in space and time imaginable.

There seemed to be no end to the powers of science and technology according to the mood of the British in the second half of the nineteenth century, as they were experiencing changes on a scale never even conceived of before.[5] It also seemed unlikely that this progress would ever be impeded in any major way. But there was a depression after the mid-century boom, which although not as dramatic as earlier or later depressions, did leave its mark in that the complacency of the British was shaken. The depression came not as a crash, but in a stagnation, and the English had to face the fact that instead of being a leader in all senses of the word, they were

by 1895 only one out of three leaders, both the United States of America and Germany having overtaken them in the production of steel, the most vital manufactured product of the new age. For the rest of the world who were trying to catch up and overtake Britain, it was not a depression, but a time of advancement, and Britain was alone in her stagnation. A new phase of technology started in the 1890's, but before this there was a hesitation as technology faltered and did not recover immediately. Other countries started producing what up until then had in practice only been available from Britain, and the British therefore turned to imperialism, not simply the formal imperialism of the Partition of Africa of the 1880's, but rather the virtual monopoly of the undeveloped world.[6]

The years of stagnation from 1873 to 1896, although shaking the smugness of the British confidence in technology, certainly did not shatter it as so long-term devastation occured. Once the second phase of imperialism had been put into effect, the British picked themselves up, dusted themselves off, and continued on their course of advancement through

scientific progress, confident once more in the healing powers of technology. In this manner, science and technology had taken over the traditional healing and redemptive powers of religion, but did not provide the non-material ratification for these powers.

The important point to note here is that the economic and technological developments of the time were not free of problems, but they were not devastating problems which could not be overcome. At most they were delays in the path of progress, and were certainly not major setbacks. The general mood of the time was one of optimistic discovery, laced with slight apprehension of what lay ahead. The apprehension was the natural fear of the unknown, and not in any way a premonition that technology might lead to disaster.

It was an exciting and sometimes frightening time; the world was changing so rapidly that it was difficult for the average person to keep up with and make sense of the changes. It would appear that the growing uniformity of industrial societies which

started in Britain and soon spread to the European continent and the United States of America needed an imaginative frame of reference which could give shape and meaning to the hopes, fears and fantasies of humanity. The placing of technology in an overarching worldview was required because the biggest change with which the people had to cope was the increased secularisation and mechanisation of the world.

It was into this turmoil and sense of crisis, the feeling of being at the end of an era and the start of a new one, that the writers Jules Verne and H G Wells exploded into popularity, and precisely the conditions of the time which gave rise to the genre which has been called science fiction. Within that literary genre, Verne and Wells produced apocalyptic visions of expectation and hope which suggested the outlines of a worldview that might embrace technological progress.

2.0 Jules Verne

The title of 'father of science fiction' which has

been attached to Jules Verne and one which he shares with H G Wells, was earned both unintentionally and unknowingly. Verne had tried many careers, including the law and the writing of operettas and comedies, before he thought of writing a 'Roman de la Science', which he speculated would be "the vein that leads to the gold mine".[7] On 24th December 1862, P J Hetzel published Five Weeks in a Balloon, the first of forty-seven "Voyages Extraordinaires", and it was instantly successful. Unknowingly, and with a truly commercial heart, (he quickly decided that one of his heroes should not be an exiled Polish patriot for fear of reducing sales in Russia)[8] Verne set about creating new horizons and idealising visions of human achievement, with the scientist at the centre of the story, and by basing his stories on the scientific facts of the time, he was able to obtain an illusion of reality. H G Wells wrote in the preface to a collection of his own works in 1933, that Verne

> dealt almost always with actual possibilities of invention and discovery, and he made some remarkable forecasts. The interest he invoked

> was a practical one; he wrote and believed and told that this or that thing could be done, which was not at that time done. He helped his reader to imagine it done and to realise what fun, excitement or mischief would ensue. Many of his inventions have 'come true'.[9]

Basing his stories on reality was important to Verne as it made them fantastical while not being fantasy; they were fashioned as a frame of reference that was secular, industrial and mechanised. These fixed points of reference provided the necessary immediacy and relevance for an apocalyptic fiction which would explore what Verne perceived as the real possibilities of science.

Verne's topic was nature, and modern, scientific attempts to come to terms with, understand and control nature. Current ideas were disrupted and reversed, new boundaries created, reached and transcended, and in these acts of apocalyptic imagination, the dimensions of time and space and the classification of groups were inverted, re-organised and transformed, yet all within the familiar frame of reference of what

was regarded as the scientific knowledge of the time.

2.1 Space

Verne placed great emphasis on space; insideness versus outsideness, known, enclosed space versus foreign, open space, hugeness versus smallness, and limited space versus unlimited space. He inverted the accepted realities of the time so that what was thought of as outside became inside and the foreign became known. All this was managed through the ingenuity and supremacy of modern man over nature. Journey to the Centre of the Earth was such an inversion of the accepted ideas of spatial orientation. The internal world was the unknown one, and instead of being a place of safety as opposed to the dangers of the universe 'out there', it became fearful, dark and unexpected, with immense caverns, galleries and vast abysses. These abysses, which Mark Rose has suggested should be perceived as imaginative versions of the cosmic void,[10] are central to the book. Such void-like spaces appeared in the dreams of the travellers before they left home, like Rudolf Otto's Mysterium, Tremendum et Fascinans, and are seen as a real danger which at

the same time had a fascinating attraction. Professor Lidenbrock, a geologist, and the pioneer who decided to travel to the centre of the earth, had a nephew Axel, whom he forced to accompany him on his voyage, even though Axel was terrified and convinced they would never return. Before they left home, Axel, who is also the narrator of the book, said

> I dreamed about abysses all the time. I became delirious. I felt the Professor's strong hand gripping me, dragging me along, pulling me into chasms and quicksands. I kept hurtling into bottomless abysses with the increasing velocity of bodies dropping through space. My life had become an interminable fall.[11]

and later

> I felt my centre of gravity moving, and vertigo rising to my head like intoxication. There is nothing more overwhelming than this attraction of the abyss.[12]

Known limits and points of reference, such as the poles and the equator, were obessions of the nineteenth century,[13] because of imperialism and the desire to know

and possess distant and strange lands, and reaching them was a sign of conquering limits, of reaching completion. By turning inwards, Verne inverted these limits and created new ones, that is, the centre of the earth was a completion which had not been thought of before as a possible limit. The earth itself became the unknown, the imagined power which had to be reached and conquered, and reaching the centre in this instance, was a penetration of the very essence of nature in order to possess it completely.

In Twenty Thousand Leagues under the Sea space is treated in the same way, that is, Verne turned inwards in the search to know the unknown. From the safety and comfort of the Nautilus, the travellers were taken through unimagined vistas in an effort to reach the unreachable, to penetrate nature's mysteries as never before, and in this way, known boundaries and limits were inverted and new ones were set in the reader's imagination. As in Journey to the Centre of the Earth, the travellers applied human names to the wonders they discovered. For example, Port Grauben, Lidenbrock Sea, and Axel Island. This is another way of imposing man's

supremacy on the conquered world of nature, which is making the space familiar and therefore inverting the categories. Therefore, Verne's treatment of space was to invert what was thought of at the time to be the limits and boundaries within the earth, and to conquer the unreachable in the name of scientific progress.

2.2 Time

Temporal orientation was not treated as literally as spatial orientation, and the journeys travelled were journeys into the abyss of evolutionary time. The key to this was that the travellers were in effect travelling backwards in more ways than one, and this became the search for the ultimate origins of humanity.[14] In Journey to the Centre of the Earth, the clue to origins was found in the cryptogram which had to be deciphered. Axel and Professor Lidenbrock spent hours trying to de-code the note and Axel finally realised it had to be read backwards in order to make sense. When they started their journey they were reading nature backwards in their quest for the beginning, and inversion of temporal orientation was produced by

reading the temporal flow of human progress backwards to arrive at its primordial beginnings. They came across more and more primitive forms of nature as they went, but they never actually reached the centre of the earth. Verne overcame this obstacle, (it was an obstacle because Verne could not allow an eminent scientist to fail) by making Axel reach it in a dream. This is functionally the same thing, reality here being of no consequence, and the travellers had effectively conquered nature and reached the ultimate of the earth's creation. Just as in religious apocalyptic myth the apocalypse was seen to have happened, so have the travellers symbolically reached the centre of the earth, not by arriving there spatially, but through a transposition of time.

This has also been seen by Mark Rose as a fusion of spiritual and material worldviews. In arriving at the centre of the material world, Axel himself entered into a spiritual experience of the cosmic infinity:

> Sweeping backward into the abyss of time in quest for the centre, the point of origin, Axel finds the heat becoming more and more intense until the earth's granite liquifies and finally

> the planet itself dissolves into its original white-hot gaseous mass: 'In the centre of this nebula, which was fourteen hundred thousand times as large as the globe it would one day form, I was carried through interplanetary space. My body was volatilised in its turn and mingled like an imponderable atom with these vast vapours tracing their flaming orbit through infinity.' At the ecstatic centre, the boundary between man and nature, the human and the non-human, melts and the explorer merges with the world being explored.[15]

Verne inverted the dimension of time by making his travellers travel backwards instead of forwards, which is how time is seen to pass, or in other words, he made the dimension of time something which could be moved in a way thought to be impossible.

2.3 Classification

An important feature of religious myths of the apocalypse and of science fiction is the divide between the human and the non-human, or similar and foreign beings. Verne, in taking the reader back in time, introduced him or her to weird forms of life, both plant and animal. Even the shepherd in Journey to the Centre

of the Earth was seen as non-human, as he was of an extinct species and therefore 'other':

> He was over twelve feet tall. His head, which was as big as a buffalo's was half hidden in the tangled growth of his unkempt hair - a positive mane, like that of the primitive elephant. In his hand he was brandishing an enormous bough, a crook worthy of this anti-deluvian shepherd.[16]

It is interesting that this shepherd was not in any way involved with the travellers. Non-human beings, from primitive men to animals, were never involved in any battle or confrontation of any kind with the travellers. They fought among themselves, but did not threaten nineteenth century man, whose supremacy never had to be put to the test.

The animals encountered varied from huge cow-like beasts to the prehistoric dinasaur-type, two of which get locked in a mortal battle in the sea across which Axel, the Professor and Hans, their guide are travelling, causing enormous waves and near disaster for their very basic little raft. Though there is little difference

between the animals and humans known to the reader and those found in the book, the biggest difference was in size. They were all much bigger than expected; prehistoric man was over twelve feet tall, the cows were the size of elephants and the plants, even the mushrooms, towered over the travellers. This re-inforces the 'otherness' of their kind. Another difference is in the human versus non-human sphere, and that is in intelligence. For Verne's travellers travelling backwards, the creatures, even those similar to man, were all far less intelligent and far more backward than modern man. This is of course necessary if one is travelling backwards in evolutionary time, though it is characteristic of all science fiction for aliens to be either far less or far more intelligent than humans. Verne could have invented a race of super-intelligent beings living underground and monitoring the world above them, but he did not. This is in itself an interesting point; it was not recognised in the nineteenth century that some previous civilisations had been intelligent. 'Primitives' were obviously dismissed as suffering from primordial stupidity, but even those such as the civilisations of Greece or Rome were not considered

to be of any real value because they had been pagan and decadent, and because of this had come to the end which they had richly deserved. The evolutionary idea was that man progressed and did not retrogress, and had never been as scientifically, morally or culturally advanced than the societies of the nineteenth century. The idea of primoridal stupidity was an important element in nineteenth century evolutionary theories of 'otherness' in religion and human cultures different to that of European civilisation. Therefore, if one travelled backwards in time, one would necessarily not meet anyone of intelligence or knowledge equal to, or better than, nineteenth century man.

It is also interesting to note that in Verne's work this 'otherness' did not extend to monsters or non-human, destructive machines. Machines were in evidence; enormous submarines, spaceships and gadgets such as compasses, all similar in structure to the vast, industrial machines of the time, and all powerless without man to control or work them. Just as the terror induced by the unknown animals was the natural terror due to their size and physical strength, so were the machines in Verne's work not monsters. The

machines did not have power or minds of their own, and they were seen as a feature of progress, a means of getting to grips with nature and not things to be feared in their own right. They were still regarded as extensions of human power, not as dehumanising technological forces which threatened to overwhelm human beings.

2.4 Symbolic Inversion

When the travellers in Journey to the Centre of the Earth ended their journey after being erupted out of a volcano together with ashes, lava, pumice stone, and the usual flotsam and jetsam connected with volcanic eruptions, Verne delivered his final trump card of the inversion of space. All along the journey from the descent into the extinct volcano Sneffels until the final ejection, the reader is subjected to detailed and tedious accounts of latitudes and longitudes, all faithfully recorded by Axel. When Axel believed they were in Iceland, some 1 500 miles from the crater of Sneffels, the reader is quite prepared to believe him - after all, it is accurate, scientific recording by accurate, scientific methods and instruments. It is

a great shock to the reader, as well as to Axel, to discover when they have returned to the surface once more, that they were not in Iceland but in Sicily, more than 3 000 miles away. How could such a modern, scientific instrument as a compass be wrong? The professor worried about it constantly, though Axel was at first so happy to be alive that he did not care. Finally the mystery was explained - the magnetic pull inside the earth and the intense heat of the fireball which erupted caused a reversal in the compass needles and what was actually north registered as south on the instrument.

This reversal is the ultimate inversion of the known. Verne seemed to be suggesting that science helps man control nature, but has a power of its own which can fool man too. It can outwit man simply because man has only scratched the surface of its secrets, or in other words, man should hurry up and learn, so that time and trouble were not wasted in this way. In the end, it was luck and not science which saved the travellers. For science to have saved them, they would have had to have had a lot more knowledge than they possessed.

It would seem therefore, that Jules Verne, writing within the scientific limits of the time, imaginatively inverted the dimensions of time and space and the classification of groups, in order to transcend the limits of the nineteenth century and thereby place some structure and sense of order on the upheavals in the world of technology which were occuring in the second half of the nineteenth century. Through this secular version of traditional apocalyptic myth, he opened up new horizons so that the crises were seen as part of a larger pattern of events, and the crises were managable, as part of the quest for a better world. The crises took the shape of the idea that a new age was about to be born; a new age which would be beneficial to all humankind, and with scientific, modern man at the helm, it could not go wrong. Western society in the nineteenth century felt the need for an apocalypse in the same way as the societies who needed a religious apocalypse. The need had not changed; the nature of the desired apocalypse had. What Verne through the radical displacement of the elements which make up a worldview did, was provide new interpretations of old ideas and the result was apocalyptic literature which was relevant to the largely secular world of the

late nineteenth century.

3.0 H G Wells

Herbert George Wells became a writer after failing to find fulfillment in the stifling world of commerce where he had been apprenticed twice, and after failing as a teacher due to ill-health. As a married man with a wife to support, he had to find a lucrative and enjoyable occupation which would allow him to stay at home and recover from the terrible lung-infections from which he suffered regularly. Science had always been his passion, and if he could not teach it, he could turn it to some other advantage.

Although he did not only write scientific romances (as they were called then), it was the scientific romances which brought him fame and fortune. It was said by I F Clarke that "his special contribution to the development of the genre was to find original applications for those themes of future warfare, future despotism, future utopias and future technological advances that held the interest of the readers."[17]

But Wells also saw himself as a social prophet. Whereas Verne, in the few times he warned man about science seemed to be chastising a naughty child with a toy which is impotent without the child to direct it, Wells' science was a formidable, powerful force and a threat in its own right. Wells' work contained the steady reminder that science is not always a good thing and that man knows only a fraction of its capabilities. In Wells' own words

> Outside the little envelope of our human life a great ordered universe swings through dimensions unimaginable to our minds, that outside the flickering glow by which science has enabled us to see something of its wonders, is darkness still.[18]

Throughout his work there was a constant warning that human beings might be playing with fire; there was still so much which was not understood that the world could do irreparable damage to itself by blindly hurtling along the path of progress without careful observations of where it was leading, as well as some sort of control securing it.

Wells, in a letter to Arnold Bennett[19] said "there's a quality in the worst of my so-called pseudo-scientific (imbecile adjective) stuff which differentiates it from Jules Verne..... isn't there? There is something other than either story-telling or artistic merit which has emerged through the series of my books. Something one might regard as a new system of ideas - thought."[20] By 'thought' Wells meant social criticism. Later, he stated publicly in a preface to a collection of his works that "by this time (that is, 1906, the time of his writing of In the Days of the Comet) I had tired of talking in playful parables to a world engaged in destroying itself. I was becoming too convinced of the strong probability of very strenuous and painful human experiences in the near future to play about with them much more."[21] Wells was confident that the human race was well on the way to self-destruction, and was convinced that some sort of order or restriction should have been placed on all the new inventions and discoveries of the time.

Wells was extremely aware of just how fragile human life, and indeed human existance, culture and civilisation could be, and his imagination jumped to what

could happen if scientific power got into the wrong hands; if there was life on other planets; if there was war between the planets; and if man could travel between the different worlds and galaxies. Through these flights of fancy, a whole new vista of possibilities was opened, and the genre of science fiction provided Wells with a vehicle for social prophecy and apocalyptic imagination, that transformed the categories of time, space and classification in the symbolic worldview that infused his work.

3.1 Space

Wells constantly reminded the reader of the enormous distances between the earth and the other planets, and this is to make the reader aware of just how tiny and unimportant he/she is in the greater scheme of things. It is evident in phrases such as "the immensity of vacancy in which the dust of the material universe swims"[22] and the "unfathomable darkness of space".[23] Yet it is precisely these reminders of the vastness of space which Wells overcame and suddenly, whereas man had thought these distances to be final

and untravellable, these distances were made coverable and what was thought to be impossible became a distinct possibility. Accepted boundaries and limits were shattered as the universe was inverted and new centres and peripheries were made; the security of the known world was no longer steadfast.

3.2 Time

In a similar way to Verne, Wells was very interested in evolution and the horror of the cosmic void or the abyss, and he turned accepted ideas of space and time upside down as he speculated on their possibilities, though unlike Verne, he was more inclined to look outwards into space than inwards into the earth and the sea. This is taken to extreme in The Time Machine and is also evident in The War of the Worlds and The First Men in the Moon, where both the Martians and the Selenites (the inhabitants of the moon) were far advanced in intellectual evolution. "The Martians seem to have calculated their descent with amazing subtlety - their mathematical learning is evidently far in excess of ours"[24] and "the unlimited growth of the lunar brain has rendered unnecessary the in-

vention of all those mechanical aids to brain work which have distinguished the career of man. There are no books, no records of any sort, no libraries, nor inscriptions. All knowledge is stored in their distended brains"[25] are examples of this. In a similar fashion, the Martians too have enormous brains and atrophied bodies, but more importantly, they have been stripped of all emotion and feeling, so that all but the instinct for survival had been eliminated:

> Physically feeble as a result of extreme evolution and the unaccustomed gravity of earth, the Martians move painfully and slowly like dying creatures. Only their eyes, the signs of the their intelligence, are intense and vital. Their strength comes from their elaborate machines, mechanisms that are, like themselves, grotesque images of life in death.[26]

This is a different type of evolution to that of the Selenites who had evolved to such an extent that all their knowledge was stored in their brains, like computer information. They did not need books or

any form of written record as once learned, the information was stored away forever. Interestingly, their bodies were also frail; not atrophied like the Martians, but seemingly made out of eggshells, which shattered at the slightest blow, as the men who travelled to the moon discovered to their amazement and horror.

3.3 Classification

Otherness and the non-human were brilliantly portrayed in Wells' images of the Martians, both in character and in appearance. It is characteristic that humans define things in terms of analogy, whether visual, auditory, or in any of the other senses of smell, taste and touch, as human beings have to start with their own field of reference in order to describe something as having departed from it. The Martians did not resemble man other than in the number of limbs they had and the fact that they walked upright, but their body-covering - it is difficult to call it skin - seemed to be made out of a substance like spongy, oily leather, and their features were what humans perceive as grotesque:

> The peculiar V-shaped mouth with its pointed upper lip, the absence of brow ridges, the absence of a chin beneath the wedge-like lower lip, the incessant quivering of this mouth, the Gorgon group of tentacles..... There was something fungoid in the oily brown skin, something in the clumsy deliberation of the tedious movements unspeakably nasty. Even at this first encounter... .. I was overcome with disgust and dread.[27]

In this way Wells effectively separated the Martians from anything remotely human, and at the same time, made them as offensive to his readers as possible. The images used were chosen for their horror and repulsiveness, and it seems as if Wells did not want them to appear in any way bearable. The Martians were killers, and to have made them attractive would have introduced a type of irony which had no place in a story which was the first of its kind; that of the invasion of earth by the beings of another planet, in which he wanted to instill fear and dread in his readers.

The Martians' huge brains set them apart, and they

had characteristics which effectively separated them from anything remotely human. They were vampires, drawing sustenance from living creatures, ruthless and emotionless, they set about their task of taking over earth with a systematic, determined purpose. The intention was that human life on earth would become the outsiders and they would be the rulers of the planet earth. There was a good reason for this; their own planet which seemed to be full of life when viewed from earth, was actually dying, and unless they attempted an invasion and take-over of another planet, their race would have died too. The inversion of this ruler/ruled idea is particularly terrifying as it had not occured to the human race before that creatures other than themselves could be the rulers of their planet. Other countries were constantly threatening invasion of their country, but not planets threatening take-over of their planet. Their fragile hold on what had always been theirs without question is clearly pointed out.

Another aspect of human versus non-human character-

istics can be seen in the change the narrator's character underwent as he ran from, and tried to protect himself from, the Martians. His character in the fight for survival became similar to the Martians in that he was rational, cold, and would do anything necessary in order to survive. His cold rationality saved him, and he did survive to tell the tale, unlike the curate in the story, whose 'human' characteristics resulted in madness and ultimately death. The narrator was forced to knock the curate out when he became hysterical and started shouting that the "word of the Lord is upon me!"[28] The Martian who was on guard at the pit heard this and dragged the curate's unconscious form out of the scullery where they had been hiding, which of course, was the end of the curate. The narrator stayed in hiding, hardly daring to move for eleven days, during which time all normal reactions were suppressed in the fight for survival, until the coast was clear and he was able to escape. At the end, when the Martians had died, the narrator returned to the 'human', and emotion, which had previously been substituted for pure, cold logic, returned to

him as he had survived. Wells seemed to be saying here that war and the fight for survival rob man of his humanity and this could become a permanent state if the earth is locked in a continual fight for survival.

The Selenites in The First Men in the Moon were also totally unlike humans in appearance, and this also points out the alienating aspect of 'otherness':

> .....they fall under no division of the classification of earthly creatures..... the insect type of anatomy had, fortunately for men never exceeded a relatively very small size on earth ..... but here..... a creature certainly as much insect as vertabrate seems to have been able to attain to human and ultra-human dimensions.[29]

To the narrator of the story they resembled ants, and they were further separated in their 'otherness' by the fact that "in addition to the two forms , the male and the female, (there are) a great variety of sexless creatures, workers, soldiers and the like, differing from one another in structure, character,

power and use, and yet all members of the same species."[30] This systematic classification of the Selenites resembled a hive of bees rather than a society of thinking beings, and in fact resembles the over-ordered society of later dystopia stories such as Brave New World, written by Aldous Huxley in the nineteen thirties. Wells was convinced that society should organise its scientific discoveries, and Huxley in his ironical novel Brave New World was satirising this extreme organisation which he felt was worse than no organisation at all. Unwittingly, Wells provided the base for Huxley's satirisation of an organised society, as the Selenites seemed not to be individuals at all, but rather, cogs in the great machine of their society.

The difference between the Selenites and the Martians was that the former turned out to be quite friendly when they realised that Cavor, the inventor of the craft which travelled to the moon and the person who got left behind on the moon forever, was not a threat to them. Wells re-inforced this by not using the

hideous, grotesque images and adjectives he used to describe the Martians when describing the Selenites. His Selenite adjectives were not attractive, but not grotesque either, and "these Selenites are not merely colossally superior to ants but according to Cavor, colossally in intelligence, morality and social wisdom, higher than man"[31] illustrates this. It seems clear here, that Wells did not think the organisation of the Selenite society was a bad thing, but it would also seem that he did not realise the full implications of an over-organised society, as were pointed out by later writers such as Aldous Huxley and George Orwell.

3.4 Inversion

The Time Machine was a combination of a displaced utopia and an inversion of accepted ideas of time. It was a basic leap forward in evolution and a warning that progress is not necessarily a good thing, as well as a salutation to the power of science in man's hands.

In contrast to Jules Verne where the travellers moved backwards in order to discover the ultimate, Wells' hero moved forward in a slow process of discovery, as Mark Rose has said, "in which mystery after mystery unfolds and is explained, right up to the final death of the universe."[32]

> At last a steady twilight brooded over the earth, a twilight only broken now and then when a comet glared across the darkling sky ..... the sun had ceased to set - it simply rose and fell in the west, and grew ever broader and more red.....

and

> at last, more than thirty million years hence, the huge red-hot dome of the sun had come to obscure nearly a tenth part of the darkling heavens [33]

are some of Wells' finest pieces of writing, and their effect is as stunning now as when they were written. They were in a sense a prophecy and an enlightenment, as well as his usual warning that

the human race and the earth it inhabits, are mortal while the cosmos is not; there will be other universes and galaxies, and humanity is only a minute part of nature.

As previously mentioned in Chapter I, the time traveller discovered the reality of what man had become; two separate races, one of darkness and the underworld, the other of paradise and light. The appalling truth dawned on him that contrary to what he had originally thought, the Morlocks were actually the dominant race, and their characteristics were closer to those of nineteenth century humanity than the advanced, unwarlike Eloi. The final fire and the battle with the Morlocks has been described by Mark Rose as "the image of the blind, stumbling creatures trapped on the hill, which the traveller calls 'the most weird and horrible thing, I think, of all that I beheld in that future age' is a vision of the condition of all living beings trapped in the nightmare of mortality. It summarises the felt meaning of the pain and incomprehension of being in time."[34]

The final battle itself can be seen as apocalyptic, as

it is an inversion of the ruler and ruled. The Morlocks hover on the edge of the Eloi society, waiting for their opportunity as they are actually more powerful than the Eloi, yet the Morlocks lost the battle. The forces of good, that is the Eloi and the time traveller, triumphed this time, but it was not a final triumph; the tension between good and evil is maintained by the fact that another battle could start at any time, and the Morlocks could win. The Eloi, being 'good' are the rightful rulers, but do not rule. They are in the hands of the powerful but 'evil' Morlocks. An apocalypse is needed for the rightful rulers to take their place, but in order for the promise to be effective, the Eloi must continue to be the ruled, and the promise remain simply a promise and not a fulfillment.

Another point to note is that the traveller himself caused the fire with his matches, implements of the nineteenth century. In the same way, the cause of the decadence and ghastliness of the future can be found in the nineteenth century. This is another of Wells' warnings not to get carried away with scientific discoveries, just as the inversion of

controlling and controlled groups is a warning.

4.0 Conclusions

In the writings of both Verne and Wells, the tension of opposites is maintained throughout, the most important dialectic being that between good and evil, life and death. Verne portrayed life in the supreme achievements of man and the ways in which he conquers nature and strives for scientific truth. His heroes pursued knowledge and discovery with fanatical perserverance and always emerged triumphant. This is far more than just a happy ending; it is the triumph of good (that is, the positive progress of man) over evil, (that is, over darkness and ignorance, or in other words, death.) It is the apocalyptic myth of the final victory of good, translated into a modern, secular setting.

Other contrasts, such as that between cold and hot, dark and light were also in evidence, and these too were inverted versions of acceptable ideas, and also represented good and evil. The unexpected

temperature of the middle of the earth (it was not nearly as hot as the travellers had imagined it would be, though it heated up considerably in Axel's dream when he became one with the universe), is an example of this, as is the contrast between the warm sun of Sicily with the unexpected freezing temperatures of Iceland, which was where they thought they would surface.

In Wells' work, the tension was much more clearly maintained. The Martians were images of death; they came from a dying planet, they killed everything and everyone who stood in their way, and their machines, which seemed to have a life of their own, were instruments of death. In The War of the Worlds life triumphed, but only just. The one factor the Martians had not considered was that there may be germs or viruses in the earth's atmosphere which could kill them, and this turned out to be the truth. They did not last long on the planet earth, and died reasonably quickly, before too much damage had been done. In The Time Machine life did not triumph in that the traveller witnessed the the death of the sun and the earth. Hideous, crab-

like creatures crawled across the shore (which could be a metaphor for the edge of time) and there was a horrible possibility that these were the descendents of humanity. Still later, these too became extinct, and there was nothing left of what was once the planet earth.

The colours red and black are important in drawing these symbols. The Martians lived on blood, their vegetation which they had advertently or inadvertently brought with them covered the earth with a red mass, and even the planet Mars itself was seen as red in the sky. The Martians were black, the ravaged landscape of what had been a system of towns and the green English countryside, was a burning mass of red flames and black, charred earth.

Mark Rose has said that

> The Victorian situation of urban man disconnected from God, cut off from Nature, separated from other men, is of course, our own; it is in the nineteenth century that the modern age begins, Science fiction can be understood in the context of nineteenth and twentieth century spiritual

> loneliness..... What is important is the attempt to replenish the void, to fill the immense absence with meaning.[35]

Seen in this light, it seems clear that science fiction is an attempt to give shape and meaning to the rapidly changing world of the late nineteenth century. It is a response to the crisis of a suddenly technological world in which the meaning of life has been called into question. This is functionally the same as religious myths of the apocalypse. If religious myths of the apocalypse are expressed in symbolic visions of the struggle between good and evil in anticipation of the final victory of good; if they are responses to impossible situations of crisis; and if they work through the symbolic acting out of the promise they contain, then science fiction of the type written by Jules Verne and H G Wells can indeed be seen as apocalyptic. Through imaginatively inverting the dimensions which make up a worldview, that is the dimensions of time and space, and the classification of groups, their work gave new life, meaning, and most importantly, hope, so that society could withstand the crisis of rapid industrialisation and urbanisation which they

were experiencing, through the quest for a better future which is functionally the same as the proleptic nature of the promise in religious apocalyptic myth. In the same way as religious visions of the apocalypse, science fiction opts for the promise rather than fulfillment of the promise, that is, the quest for a new world must continually be carried out; humanity must always look critically at the present, in order for stagnation and decay not to occur. The works of Verne and Wells therefore, were quasi-religious, secular apocalypses of expectation and hope.

FOOTNOTES TO CHAPTER II

1. Kermode, F; The Sense of an Ending, New York, Oxford University Press, 1966, pg 97.

2. See Hobsbawm, E; Industry and Empire, London, Pelican, 1968, pp 109-133.

3. See Hobsbawm, E; Industry and Empire, Ibid, pp 109-133.

4. Hobsbawm, E; Ibid, pg 111.
   See also
   Thomson, D; Europe Since Napoleon, Harmondsworth, Pelican, 1966.

5. See Clarke, I F; The Pattern of Expectation: 1644-2001, London, Jonathan Cape, 1979, pp 62-89.

6. Hobsbawm, E; Ibid, pp 123-133.

7. Clarke, I F; Ibid, pg 92.

8. Captain Nemo, hero of Twenty Thousand Leagues under the Sea, was originally written as an exiled Polish patriot. See Clarke, Ibid, pg 92.

9. Wells, H G; Preface to a collection of his own works published by William Heinemann, London, 1933. Reprinted 1983. What Wells was referring to was the early sea adventures of Jacques Cousteau whose first deep-sea submarine was named "Nautilus" after Captain Nemo's craft, and which bore a remarkable resemblance to the original "Nautilus" of Twenty Thousand Leagues under the Sea.

10. Rose, M; Alien Encounters; Anatomy of Science Fiction, Cambridge Mass., Harvard University Press, 1981, pg 55.

11. Verne, J; Journey to the Centre of the Earth; London, J M Dent and Sons, 1970, pg 41.

12. Verne, J; Ibid, pg 94.

13. Clarke, I F; Ibid, pp 99-101.

14. Rose, M; Ibid, pg 65.

15. Rose, M; Ibid, pg 64.

16. Verne, J; Ibid, pg 212.

17. Clarke, I F; Ibid, pg 117.

18. Dickson, L; H G Wells, His Turbulent Life and Times, Harmondsworth, Pelican, 1972, pg 67.

19. Arnold Bennett was a writer, a contemporary of Wells' and a good friend with whom he corresponded for many years. See Harris Wilson (ed); Arnold Bennett and H G Wells: A Record of Their Personal and Literary Friendship, London, Hart Davies, 1960.

20. Dickson, L; Ibid, pg 100.

21. Wells, H G; Preface to collection of own works, Ibid, pg 3.

22 Wells, H G; The War of the Worlds, London, William Heinemann, 9th Edition, 1983, pg 719.

23. Wells, H G; The War of the Worlds, Ibid, pg 719.

24. Wells, H G; The War of the Worlds, Ibid, pg 718.

25. Wells, H G; The First Men in the Moon, 9th edition, London, William Heinemann, 1983, pg 373.

26. Rose, M; Ibid, pg 71.

27. Wells, H G; The War of the Worlds, Ibid, pg 726.

28. Wells, H G; The War of the Worlds, Ibid, pg 802.

29. Wells, H G; The First Men in the Moon, Ibid, pg 367.

30. Wells, H G; The First Men in the Moon, Ibid, pg 367.

31. Wells, H G; The First Men in the Moon, Ibid, pg 368.

32. Rose, M; Ibid, pg 20

33. Wells, H G; The Time Machine, 9th edition, London, William Heinemann, 1983, pp 67-68.

34. Rose, M; Ibid, pg 104.

35. Rose, M; Ibid, pg 22.

CHAPTER III

APOCALYPSES OF IRONY AND DESPAIR: ALDOUS HUXLEY ANL GEORGE ORWELL

The most popular form of science fiction in the second period of the history of the genre, that is, the period from the nineteen twenties to the late nineteen forties which encompassed the aftermath of the two World Wars, was the idea of the ideal state or utopia, and its opposite image, the displaced utopia or dystopia.

Utopia has been defined by Barbara Goodwin as a "a form of political theory with unique characteristics, whose special advantage is its ability to transcend the ubiquitous, unassailable present..... whose aim is to highlight the defects of an existing society and to offer a practical manifesto for action, involving the rejection of individualism and its replacement by some more collective form of organisation, and would require administration rather than government".[1]
It is possible to go further though, and suggest that it is more than a form of political theory, as it

involves an element of fantasy in the form of a recipe for a new heaven and a new earth; an entirely new and perfect society. This itself shows that utopia is apocalyptic in nature, in fact the most clearly apocalyptic of all science fiction forms, and even though utopias have been in evidence for centuries, they became an integral part of science fiction from the development of the genre in the late nineteenth century. It is now impossible to consider the genre of science fiction without considering utopias.

Utopia is a vision of an ideal state. Dystopia on the other hand, is the ironic version, imaginary in the same way as utopia, but horrific. It emerges from a vision of utopia in which society has lost sight of the goal it is pursuing, that is, a better world for the people who inhabit it, and the means, that is, the rejection of individualism and emphasis on administration, become the end. It is in fact a warning against the fulfillment of the apocalyptic promise, similar to the warnings of HG Wells who felt the fulfillment would lead to decay. Dystopias however, warn that fulfillment will lead to corruption and oppression.

The initial phase of utopian writing fell between 1771, when L'an 2440 was published, and 1871.[2] Between 1871 and 1914, with the rise of science fiction as a literary genre and the rise of technology, the implications of future science were realised and the market was flooded with utopian fiction. It was during this time that the most varied and influential body of utopian fiction was written, though the impact it had was not nearly as great as the later works which were distinctly dystopian in nature.

The characteristic form of utopia as described by IF Clarke, was the ideal state of the future in which "anticipation was the prophetic image of the aspirations of industrial society. The progressive and rational utopia was the self-confident manifestation of the Promethean period in an era of technological progress, and the doctrinal base for these visions of the happiness to come was the new belief in the immense powers of a technological society - eternal, without measure, self-perpetuating, dominating, and directing the forces of nature to the advantage of mankind"[3]. In other words, the advances achieved thus far were seen as the beginning of the journey towards a wonderful, perfect

world, with science and technology being the means towards that end.

The prophets of the constructive ideal state wrote their expectations into visions of a better world, descriptions of improved metropolitan conditions, or practical designs for a new and perfect social order. They saw urban society continuing without interruption, towards a point in time to come when the nation or the whole world would reach the predestined goal of an ideal existence[4].

Yet the two versions of future utopias which have had the most impact on society and which are as relevant today as when they were written over thirty years ago, are not utopias at all, but dystopias. They are Aldous Huxley's Brave New World (1932), and George Orwell's Nineteen Eighty Four (1949). Both books were reflections of the changes the world was experiencing at the time they were written, or in other words, they were responses to the crises the world was undergoing after the initial phase of delight and wonder at the changes science and technology had had on the world. Instead of the heady euphoria

of the nineteenth century, the world changed dramatically again in the twentieth as a result of unforseen catastrophes, that is, the First and the Second World Wars.

1.0 Apocalyptic Crises of the Twentieth Century

The two world wars were catastrophes not because it was thought that wars had been eliminated or that modern humanity was beyond such barbarism; the great shocks of the wars were their unexpected nature, length, and sheer brutality, as well as the enormous waste, both in terms of human life and in terms of finance[5]. It seemed as if these crises had halted the course of progress towards an ideal existence forever, as Paul Fussell wrote, "Georgian complacency died in the trenches"[6]. The face of progress had taken on a new expression, and governments turned the technological and scientific knowledge of the times to dealing with the problems of national defence in the light of mass destruction. They had to plan and prepare for changes on a scale never experienced before.

That the First World War was a nightmare of proportions almost unimaginable to those who did not experience it has been accepted as fact since the news of the trenches and the battles reached the rest of the world[7]. The notion of the horror is so deeply entrenched, even today, that depictions of the war in literature as a normal event have been used to illustrate the abnormal. For example, Nancy Mitford in her series of autobiographical novels had a character of outrageous eccentricity (based on her own father Lord Redesdale), called Uncle Matthew. He hated all foreigners with a vengence, calling them 'Frogs', 'Wops' or 'Huns', and had terrifying rages, in which he ground his teeth so ferociously, that the rumour in the family went that he had ground down four pairs of false teeth in the course of his adult life. He kept an entrenching tool, covered with dried blood and hairs and which had eight notches on it representing eight 'Huns' he had killed with it during the war, and always displayed it with pride in his house, much to the horror and alarm of visitors. He always described the Great War as the happiest time of his life, and slaughtering 'Huns'

had been the greatest fun, even recalling the stench, mud and blood of the Somme with nostalgic bliss[8]. This characteristic was used by the author to illustrate his incredible eccentricity, which was actually bordering on insanity.

The shock of the First World War lay in the patriotism and national glory which still existed in the minds of humankind, or in the words of the poet Herbert Read, 'war still appealed to the imagination'. The millions who went off to battle in 1914 expected to play their patriotic part in a short and glorious campaign. The historian Duff Cooper explained it by saying he thought he was volunteering for an old-style war, because previous wars had never "interfered very much or for very long with the civilian population", and he "lacked the imagination to conceive that this was was likely to differ to any great extent from the others"[9]. In other words, the word 'machine' had not yet become equated with the word 'gun', and they had failed to see how technology would change the nature of war.

It has been said by Paul Fussell that the British who went to war were extraordinarily literary, and that this respect for literature made the poetry written at

the time so copious as well as so important[10]. Not only were the nobility and the upper middle classes well-versed in the classics, but for the first time, the lower classes were being educated on a large scale. It was thought that through the study of literature at Workmen's Institutes, the lower classes would be able to rise in the class system, (this was of course, quite untrue; it took far more than education to penetrate the cast-iron snobbishness of the British class system), and therefore, there were few soldiers, from privates to General Haig, who did not appreciate the value of literature. This was also an interesting difference between the populations of Britain and the United States of America, as Fussell stated "it is unthinkable that any American poem issuing from the Great War would have as its title and last two lines a tag from Horace, familiar to every British schoolboy:

'Dulce et decorum est
Pro patria mori'"[11].

Not realising the implications, the poets of the time saw the outbreak of war in totally outdated terms; "the woeful crimson of men slain"[12] was typical of

the reactions to what was seen as glory and honour, but as the horrible realities of the trenches, barbed wire, poison gas, machine guns, and the mud, blood and stench dawned on them and reverberated across the shocked world, the tone changed to "shrill demented choirs of wailing shells"[13] and "with sweat of horror in his hair .... unloading hell behind him"[14]. It is very important to note that as this revelation came to both the soldiers and the rest of the world, so did the flood of futuristic literature dwindle to almost nothing[15]; as the tide of war poetry swelled, the tide of futuristic literature faded. Suddenly, the possibility of a perfect future seemed to have lost all its meaning.

The young and innocent army who went to the Battle of the Somme on 1st July 1916 thought it would be the last and decisive battle of the war, but as Fussell has said, "that moment was one of the most interesting in the whole long history of human disillusion"[16]. In fact the entire war was a disillusion big enough to change complacent perceptions of progress forever, and the population was more than worried and anxious about what lay ahead. A new generation of writers

dismissed the idea that more technology, more progress, and more organisation must lead to a better society, and the result was that utopia became dystopia in the popular and literary imagination.

One of the first post-war stories of the future was a vision of how mankind would put an end to civilisation through its own folly. Edward Shank's novel The People of Ruins published in 1920, described how a series of wars as devastating as the First World War had wiped out most of the population of Europe, the survivors having regressed to barbarism, living in ignorance, constant violence and fear. This introduced the theme of desolation and destruction which has continued up to the present day, and in it is the implicit fear that the human race is hell-bent on its own destruction. The attitude, formed on the realisation of just how cruel, destructive and violent humans can be, especially with powerful weapons in their hands, can best be summed up by Bertrand Russell, who wrote in Icarus, or the Future of Science in 1924 "science has not given men more self-control, more kindliness, or more power of discounting their passions ..... Mens' collective

collective passions are largely evil, far the strongest of them are hatred and rivalry directed towards other groups. Therefore, at present, all that gives men power to indulge their collective passions is bad. That is why science threatens to cause the destruction of our civilisation"[17]. This was typical of the uneasy and despondent feeling of the time.

The biggest difference between the First and the Second World Wars lay not in the shock value of mass slaughter (for example, the siege of Leningrad was a battle of long duration with devastating results, but at this stage battles of this kind were almost acceptable[18]), but in the effects of a few seconds at the end of the war which annihilated entire cities. The bombs of Hiroshima and Nagasaki were shocking for the speed and efficiency with which they carried out their task of destruction. Even though the long-term implications were not envisaged, the fact that such destruction could be carried out with so little effort on the part of the attackers, changed the nature of warfare forever. This was technology at its worst, and at the same time most efficient.

It was under these conditions, disillusionment, fear for the future and fear of the powers of science and technology, that Aldous Huxley wrote Brave New World and George Orwell wrote Nineteen Eighty Four.

2.0 Aldous Huxley and Brave New World

Part of the appeal and success of Brave New World lay in the fact that Huxley was familiar with the many works of utopia which had been written in the late nineteenth century, and he could therefore through irony and satire, write a description of the fulfillment of the apocalyptic promise. Irony, as defined by the Oxford English Dictionary, is a "literary situation in which a condition of affairs or events .... is opposite to what was, or might naturally be expected; a contradictory outcome of events as if in mockery of the promise and fitness of things"[19]. Huxley, faced with the devastation of the ideology of progress by World War I and the re-evaluation of science and technology and the roles they played within the myth of progress, created an ironic exposé of the fulfillment of the apocalyptic promise in an over-organised society. It was the struggle of the

poetic imagination to devise new categories so that humanity could come to terms with the images of dehumanisation which had become characteristic of the twentieth century; massive totalitarian social systems, mechanised mass warfare and the image of mass annihilation.

Huxley used Henry Ford, symbol of the American way of life and American freedom as the central figure of worship in Brave New World. This itself is ironic, as Henry Ford was typically American, a product of a 'free' society, yet the society of Brave New World is enslaved in every conceivable way. Ford was more than a hero in the book; he was the central symbol around which the society revolved and centred its meaning.

The great industrialist Henry Ford was also a xenophobe, anti-semite and a type of social engineer. He was an advocate of the 'melting pot' theory, whereby the various nations which came to make up the American people lost all their own cultures and identities, and became a uniform, faceless, and characterless people. This extreme Americanism was

a reclassification of people by eliminating their particular ethnic and cultural histories and reducing their differences to uniformities, and Henry Ford was a prime instigator of this movement. To illustrate this 'melting pot' theory of the emerging nation of America, Ford arranged a pageant in the early nineteen twenties. A large pot was erected outside his factory:

> On the day of the pageant groups of immigrants, dressed in the colourful national costumes of their native lands, marched and danced towards the pot ..... (When the first group) of the procession reached the enormous pot it sang and danced one final chorus and then disappeared inside. One by one the various groups followed the first. From the other side of the .... pot there began to emerge people dressed alike in the current American fashion. Forming ranks, they began to sing in clear English "The Star Spangled Banner". Weaker and weaker grew the refrains of the tarantels, polkas, and kolos as more and more people emerged from the pot to swell the chorus of the national anthem. At last the foreign tunes and words were heard no more; the final flash of colour disappeared into the pot. All that could now be seen was a mass of people dressed alike and marching together. All that was heard was one song and one language[20].

Having left their homelands and cultures behind, the immigrants became uniform in character and culture in the formation of a new nation, that of America. Individuals were seen as interchangeable parts in a great machine which was society. This is very similar to the loss of individuality in Brave New World, where the people all think, act and live according to a pre-arranged pattern, and have in fact, one character. It would seem that Huxley, in using Ford as the central symbol in the book, was pointing out the irony of Ford's dream of the free society of America in which the people would actually be enslaved.

In satirising ultimate organisation, Huxley took current expressions of twentieth century and translated them into versions relevant to the sixth century of Our Ford, for example "My Ford" used as an expletive, and the sign of the "T", which is the Model T Ford motor car. In this way, the book is amusing, unlike the later Nineteen Eighty Four which although also ironic, contains no humour at all, and is filled with foreboding from the first page.

Huxley satirised science and technology before he wrote Brave New World, as he believed people such as HG Wells were wrong in advocating control over the uses of technology. He satirised Wells himself in the novel Crome Yellow, written in 1921. Mr Scogan in Crome Yellow looked, talked and thought like Wells, right up to the point where he warned, in the style typical of Wells, that the future form and direction of science cannot be left to chance and there must be organisation[21]. It is of course this organisation which Huxley is warning against in Brave New World.

Brave New World is the classic story of futuristic fiction written between the two World Wars. Huxley seemed to be saying that humankind cannot live by technology alone; that a world in which natural fibres, natural foods and even naturally created people, all of which have been replaced by scientifically made, pseudo-versions and pale imitations of the natural is not a pleasant thought. It is a meaningless and valueless world, and his descriptions of life from which all humanity has

been stripped demonstrated this extremely well. The story revolves around the discovery of a 'Savage' in one of the few Reservations which are all that is left of the world familiar to the reader. The vast mass of the world is an over-organised, technological utopia in which every person is pre-destined to fulfill a particular role in society, in a totally artificial world. The 'Savage' brought to 'civilisation' by the central characters of this civilisation, Bernard Marx and Lenina, and the story is of his inability to adapt to 'civilisation' and society's inability to understand this. The introduction of the 'Savage', twentieth century mankind's view of a 'normal' person was the tool by which the reader is made aware of exactly how Huxley has manipulated personal freedom, choice and the right to live as an individual sees fit. Without the presence of the 'Savage' the impact of the society of Our Ford upon the reader would not be nearly as great, as he is used to show the differences between the two ways of thinking. He is the field of reference to demonstrate how far humanity has drifted from what is usually thought to be normal. Late in the book, the 'Savage' had an argument with one of the leaders of the people,

Mustapha Mond, in which the 'Savage' stated what are really the traditional values of society, saying, "I want God, I want poetry, I want real danger, I want freedom, I want goodness, I want sin", and Mustapha Mond charged him with wanting the "right to be unhappy"[22]. What Huxley seems to be saying is that it is necessary to be able to feel unhappiness so that happiness can be seen as a worthy alternative. Without knowing unhappiness, happiness has no meaning.

2.1. Space

In dealing with the dimension of space, Huxley first of all made travel within the space of the planet Earth easy, but did not invent travel between the planets, or indeed mention the 'outside' at all. The reason for this was that there was no outside; all space is totally enclosed in a totally self-contained social world. Instead, he inverted the boundaries between the normal and the abnormal. The reader would consider the artificial world as abnormal, and the world of the reservation as normal, as it is closer to his/her conception of what normal

should be. The society of Bernard and Lenina, inhabited by robot-like people is strange and different, yet it is seen by all the inhabitants of that society as normal. In this way, Huxley effectively inverted the spatial dimension so that the normal has become the abnormal and vice versa.

2.2. Time

The age of Our Ford is supposed to be in about 600 years time, but 1964, Huxley wrote in Brave World Revisited that "in 1931 when Brave New World was being written, I was convinced that there was still plenty of time. The completely organised society, the scientific caste system, the abolition of free will by methodical conditioning, the servitude made acceptable by regular doses of chemically induced happiness, the orthodoxies drummed in by nightly courses of sleep-teaching - these things were coming all right, but not in my time, not even in the time of my grandchildren ..... Twenty-seven years later, in this third quarter of the twentieth century AD, and long before the end of the first century AF, I feel a good deal less optimistic than I did when I was writing

Brave New World. The prophecies made in 1931 are coming true much sooner than I thought they would The nightmare of total organisation, which I had situated in the seventh century after Ford, has emerged from the safe, remote future and is now awaiting us, just around the corner"[23]. The recessions of the seventies and the eighties with their back-to-nature philosophies and rejection of the synthetic world of the sixties may be regarded as atavistic responses to this process, as has the space race and the advent of Sputnik; the fact that the Russians put a man in space before the Americans made the Americans determined to put a man on the moon before anyone else, and this seems to have deferred the rejection of science and technology for about ten years[24]. But when Huxley wrote the above in 1964, the world was on the crest of the technological wave when it did not seem possible that things would continue in that vein.

The Brave New World was supposed to be about 600 years from the twentieth century, but Huxley has effectively inverted the time dimension by making it imminent, as there is nothing in the book with which the reader

is not familiar. There are no new scientific inventions of the future; Huxley simply used the science of the 1930's. For example, there were rockets in the book, but they are in fact just very fast aeroplanes, not spaceships. The means of transport was usually helicopter or monorail. Huxley did not invent possible scientific advances of the future, nor did he change anything material so that the seventh century of Our Ford is in the distant future; it is now. The only thing which is different is the organisation of society, and because everything else is so familiar to the reader, this appears to be able to happen at any time. In the same way, Huxley did not invent a future person who could personify the society. He chose Henry Ford, a person the twentieth century Western world feels it knows. This is effective displacement of current perceptions of time.

Another inversion of the time dimension is the fact that there is no history before the world of Our Ford. Huxley used the famous statement of Henry Ford's, "History is bunk" to eliminate history, or rather the history of time before Ford, as unimportant and of

no consequence except in relation to showing how dreadful the world had been before Our Ford put it right. The rooting of a society in a historical context is an important aspect of creating a world view; being located in a time pattern contributes to an individual's sense of self and of his/her place in the universe, and therefore lends a sense of meaning to his/her life. Removing it as Huxley did, is an alienating feature as well as an effective inversion of the passage of time in terms of a linear pattern. Time is inverted through the lack of known time before Ford, and this is lost in a nebulous past in which the people do not seem to display any curiosity.

2.3. Classification

The most obvious apocalyptic feature in terms of inversion of the parts which make up a world view, lies in the inversion of not just individuals or groups of people, but in the human race itself. Humans have been reduced to little more than machines; they are genetically programmed before their test-tube 'births' to fit into pre-arranged social and

economic slots, and through years of sleep-teaching, are quite happy with whatever slot they have been programmed to fit into. The world of the time before Ford has been turned upside down so that all personal freedom has been removed, right into the thought processes of individuals. It is not possible to rebel against the system because of the conditioning the people have experienced since before they were born. Such brainwashing reduced people to the status of robots; the only acceptable emotion is happiness, the happiness of total surrender to the will of society. Huxley introduced a tension of opposites by introducing an alternative system, that is, the system of the 'Savage' who had not lost his individual will. The debate between the 'Savage' and Musapha Mond illustrates this well. Mond did not say the Savage was mad, only that he was misdirected, and did not know what was good for him. The fact that families become an obscenity, children were produced not born, and even the food was artificial (all 'unclean' and earthy elements having been removed) are examples of the reversal of life as mankind of the twentieth cenutry knows it. Not only has science de-humanised mankind, but it has also removed

all traces of what forms the natural world. The world therefore became clinical, antiseptic and artificial, and the most frightening aspect of all was that the inhabitants of that world did not have the power to realise there was something wrong; they could not change it because they were incapable of wanting it to change.

The inversion of acceptable ideas of what constitutes humanity was continued by Huxley in the portrayal of the reservation, in the form of 'outrages' which are almost obscene.

> "About sixty thousand Indians and half-breeds .....still preserve their repulsive habits and customs ..... Marriage, if you know what that is, my dear young lady; families ..... Christianity and totemism and ancestor worship ..... extinct languages such as Zuni and Spanish and Athapascan..... pumas, porcupines and other ferocious animals .....infectious diseases ..... priests .....venomous lizards."[25]

Yet these 'outrages', including the ultimate horror of children being born not made in test-tubes, are what make the human race 'human', that is, the people

of the reservation still live natural lives, a large part of which contains freedom of choice as well as the right to feel emotions other than artifically-induced happiness.

2.4. Huxley and Technology

Huxley himself has said that one enormous failure of foresight was that Brave New World contained no references to atomic weapons or even nuclear fission as a peace-time means of energy. He explained this by saying that the theme of Brave New World was not the advancement of science as such, but rather the advancement of science as it affected human individuals[26]. The uses of nuclear energy were not apparent when Huxley wrote the book in 1931, and neither were the implications. It was the further sobering effect of the Second World War and nuclear warfare which wiped out the humour in the irony of dystopian literature, so that Nineteen Eighty Four was a more dreadful, more sombre and even more horrifying vision than Brave New World. What had been started in the First World War, that is, the use of science and technology for mass destruction, had been continued and

and worsened in the Second, and this, together with the rise of totalitarian states between the wars, that is the rise of ultimate organisation of societies in Nazism and other forms of Fascism, Communism, and even some forms of socialism, which resulted in Orwell's book Nineteen Eighty Four.

3.0 George Orwell and Nineteen Eighty Four

It has been said that Nineteen Eighty Four is an anti-Communist or anti-Socialist novel, though Orwell himself has denied this, saying it is a warning against any political system of total organisation. Many American papers were reviewing the book as a comprehensive anti-Socialist polemic and this disturbed Orwell so much that he organised for his publisher, Frederic Warburg to issue a press release in which he made it clear that what he had done was to warn against totalitarianism in any form, and far from saying that Nineteen Eighty Four would happen in the near future, he was saying that it could happen, and it was up to society to prevent this[27]. Nineteen Eighty Four is a far more political book than Brave

New World, even though both concentrate on individuals within the system and not on the system itself. Far more attention is paid to Big Brother, the leader of the society than was ever paid to Ford in Brave New World, and the Party and its politics are central to the novel, whereas in Brave New World it seemed as if politics were unimportant to the people in that they should not have to worry about the running of the society. This sort of worry was eliminated through drug-induced pseudo-happiness, and played no part in the people's lives at all.

Some of the worst experiences of the war years, such as the party system, constant battles, propaganda, and the new wave of police were the thoughts which provided Orwell with the idea of what could happen if the world continued to act in the manner which had developed in the twentieth century, that of using technology in a terribly destructive way. Some critics went as far as to suggest that the roots of the idea for Nineteen Eighty Four could be found in the posthumously published account of his schooldays at Eton; "Such, Such were the Joys is so unhappy and so horrific a picture of institutional despotism that some have seen it, rather than the political

events in Europe in the 1930's and 1940's as the origins of Nineteen Eighty Four"[28]. Orwell's biographer Bernard Crick however, felt this was an exaggeration, as Orwell spoke of 'unnecessary torments' which implied individual events, rather than a general process or permanent condition[29]. What Orwell seemed to be saying in Nineteen Eighty Four was that science and technology cannot help mankind, except in providing the weapons and means for the control of others, and if in the wrong hands, this control could de-humanise and reduce the people not to robots, incapable of thought, as in Brave New World, but to terrified animals, capable of thought but too afraid to allow themselve to think.

The hero of Nineteen Eighty Four is Winston Smith, a man who dared to criticise the system, and was caught plotting and fighting against it. Through fear of the Thought Police, the people never even dare think a treasonable thought in case someone suspects it and reports them; suspicion is enough for a conviction, and the punishment is almost certainly death by torture. Orwell created a world where the technological ethos, that is the efficiency, rational organisation and bureaucracy which make up a

technological ethos, exists but without any of the advantages it is supposed to bring with it, such as the saving of labour and time-wasting activities so that life can be made easier for society and give the people more time for leisure activities. There is very little science and technology in the book; the only technology is of the kind which makes it easier for the police to control the people, and the kind which workers use in their places of employment. Nothing in their apartments or in their lives is of any help to them and they have no labour-saving devices at all. Scientific and technological tools of the twentieth century either do not exist in the book or they are permanently broken, which is a way of maintaining the submissiveness of the people as they have no help at their disposal and are constantly battling to keep some sort of order in their lives. There is also very little in the way of the future in the novel; the interesting part is that it was set almost in the present. Orwell chose the year 1984 as one far away enough in order to give the world time for this society to develop and therefore to be a threat to the readers, and at the same time close enough to make it imminent. He found a convenient

solution to the problem of choosing a year in which to set the novel; it was written in 1948, and he simply reversed the last two digits in order to pinpoint a plausible time[30]. Bearing in mind that there is very little science and very little in the way of the future, can it be said that Nineteen Eighty Four is first of all science fiction, and second of all, in any sense apocalyptic ?

Nineteen Eighty Four is a displaced utopia story. This in itself lends the novel to the science fiction genre, but more clearly, Mark Rose has said that "science fiction stories either portray a world that is in some respect different from our own, as for instance in stories set in the future or on other planets, or alternatively, they describe the impact of some strange element on our world, as in alien-invasion stories or evolutionary fables. Science fiction stories in other words, always contain an element of the fantastical"[31]. When looked at in this light, Nineteen Eighty Four can be called science fiction for more than one reason. The society is very different from our own, and the strange element which has made an impact on the world is the totalitarian

state as Orwell described it, and it can also be seen as a political evolutionary fable. Orwell has substituted the politics of a dystopian society for the progress of science in evolution, and this is a similar literary tool. We now need to examine the book to see if it is in any sense apocalyptic. Taking the characteristics of apocalyptic in terms of the inversion of dimensions which make up a world-view, it would seem as if Nineteen Eighty Four is indeed an apocalyptic novel.

3.1. Space

The dimension of space and the inversion of this dimension was dealt with in an unusual fashion in Nineteen Eighty Four. Instead of boundaries having been redefined and the centre becoming the periphery the boundaries were constantly being redefined and there are no clear boundaries from one minute to the next. The world is divided into three areas, Oceania, Eurasia and Eastasia, but their allies are constantly changing so that the people are not only unsure where these powers begin, end or meet, but they are also

unsure of who are enemies and who are friends. "Oceania was at war with Eurasia and in alliance with Eastasia. In no public or private utterance was it ever admitted that the three powers had at any time been grouped along different lines. Actually, as Winston well knew, it was only four years since Oceania had been at war with Eastasia and in alliance with Eurasia ..... Officially the change of partners had never happened, Oceania was at war with Eurasia: therefore Oceania had always been at war with Eurasia"[33]. The people are never sure where the boundaries of their friends were, or if they would change. Each time their enemies changed, history was rewritten in its entirety, so that it appeared that they had always been at war with the same power. The reason for this was so that the people did not have any sense of security or continuity. There is nothing in the book to indicate that the authorities wanted the people to be secure; it is far better for the authorities that they are insecure and not sure of the facts as this makes them less likely to revolt, and the Party cannot be seen to be wrong or to make a mistake. The Party is right, the Party knows best and what is done is for the good of

the population who cannot be allowed to question it in case the Party is proved to be wrong. This would be fatal for the Party as they would lose their power-base.

3.2. Time

A persistent confusion between fact and fiction is a constant theme in the book and this is true of the dimension of time as well as space. Winston was not at all sure of the passage of time. "A sense of complete helplessness had descended upon him. To begin with, he did not know with any certainty that this was 1984. It must be round about that date, since he was fairly sure that he had been born in 1944 or 1945; but it was never possible nowadays to pin down any date within a year or two"[33]. In this way, Orwell has inverted the dimension of time from something constant and known to something unreliable and insecure. Unlike Huxley, in whose novel Brave New World history has been made unimportant before the age of Ford and always very vague with the hint that it is better not to know the details as life

before Ford had been so unpleasant, Orwell's society did not bother with the happiness of the people and the Party simply rewrote history to suit the conditions of the time. But, both transform (apocalyptically), the present order by eliminating any ordinary sense of stable continuity in the past.

Orwell also seemed to be saying that there is no need to wait for the apocalypse, the world is acting as if it has already happened. The furious controversies and differences between Stalinists and Trotskyists, between Liberals and Socialists, between government and government in the Cold War, were all evidence that Orwell was not predicting into the future he was describing the present as the world was well on its way towards the kind of society reflected in Nineteen Eighty Four. This is very similar to the proleptic nature of biblical and other religious apocalypses, where the people acted out their hopes in order to be able to cope with the unpleasantness of the present. The modern world is acting as if it wants Nineteen Eighty Four to be a reality; the fact that the world has behaved the way it has in the twentieth century is an indication of this. There is no

evidence that it will not happen, that societies will come to their senses, and warnings such as those issued by Orwell have shocked the nations, but have not done anything to prevent them from continuing in this pattern. Orwell seemed to be warning against what could happen if the world did not stop acting out the future which is the world of Ingsoc, Newspeak, Thought Crime and the Thought Police.

3.3 Classification

The reader identifies with Winston because he is 'like us' - the 'otherness' in the novel belongs to the authorities, and the worldviews we know have been turned upside down; the vast majority of the population do not see that they should be the rulers, or rather what they stand for is actually 'correct' and the inversion of the ruled/ruler is a constant all-pervading horror in the book. These 'incorrect' rulers might not have come from another planet or galaxy like the Martians in Wells' work, but they are as different and 'other'

as if they have. It is interesting that the main fear in the book is that of being caught by the Thought Police for having treasonable thoughts, which are any ideas and thoughts which threaten acceptance of the status quo. In Brave New World there is no terror, there are no Thought Police as it is inconceivable that they would ever be needed. It is impossible for the people to commit thought crimes as their conditioning effectively prevents them from thinking at all and threats to the system just do not exist. "The purpose of Newspeak was not only to provide a medium of expression for the worldview and mental habits proper to the devotees of Ingsoc, but to make all other modes of thought impossible"[34]. It shows that society had not reached the stage of sleep-teaching approval of the system, and "it was intended that when Newspeak had been adopted for once and for all and Oldspeak forgotten, a heretical thought - that is, a thought diverging from the principles of Ingsoc - should be literally unthinkable, at least so far as thought is dependent on words"[35], and was their plan for eliminating resistance to the system. In the meantime, the population lived in constant fear of the

'other' by whom they were being ruled in case a treasonable thought slipped into their minds inadvertently; whether intended or not, a thought crime was a thought crime, and punishment was inevitable.

Not only are groups reclassified in Nineteen Eighty Four, but there is an individual inversion of categories as well. Nobody knows who can be trusted and who cannot and everyone who lives by the Party rules is 'other', in fact, this is the entire population, as even Winston pretends to be a good citizen and pretends to love Big Brother. A surprising turn in the novel is that when he is caught, Winston is not eliminated, as this is the characteristic form of punishment for treason. People disappear as if they had never existed, and all traces of them also disappear; nobody mentions them, they are not missed, and their memories are wiped out completely. This treatment is the same as rewriting history; according to the officials, the missing person had never existed at all, and it would be extremely foolish of anyone to contradict this. But Winston is not killed; instead he is tortured and brainwashed so that in the end, he does love Big Brother

and will never have treasonable thoughts again. Just as the Savage in Brave New World cannot live in the world outside of the Reservation and he kills himself rather than having to live in it, so is Winston, that is, the 'real' Winston, killed through brainwashing. The man alive at the end is not the man who is the hero of the story, which is worse than physical death as his principles have been compromised; the Savage dies a physical death, true to his conscience, but Winston does not have any conscience left as it has been effectively eliminated; he has died a social death.

4.0 Conclusions

Brave New World and Nineteen Eighty Four are both extremely effective as examples of apocalyptic literature for two reasons; first, apocalyptic promise is supposed to bring with it a new era, a new heaven and a new earth, and through irony, both books reach this new era, even though they do this in a manner which had not really been thought of before, that of ironic, displaced utopias. Both books are warnings

against the fulfillment of the apocalyptic promise, that a new heaven and a new earth are not necessarily better than the previous one. They are ironic descriptions of a world in which social control is the watchword, and deviation, that is, any display of originality or innovation is seen as a danger to society and must therefore be stamped out, or in other words, they are descriptions of ultimate, this-worldly, collective salvation, but through the use of irony, do not promise a better world.

Second, through the inversion of the dimensions of time and space and the classification of groups, current worldviews are turned upside down, and through the functional equivalent of acting out the promise as if it has already happened in the quest for a better future, these works are indeed apocalyptic literature, and function in similar ways.

FOOTNOTES TO CHAPTER III

1. Goodwin, B, and Taylor, K; The Politics of Utopia A Study in Theory and Practice, London, Hutchison and Co, 1982, pg 9.
   See also
   Marty, M; "Irony in American Religion", in Journal of the American Academy of Religion, Vol LIII, No 2, June 1985.

2. L'an 2440, written by Sebastian Mercier, was published in France in 1771, and proved to be a novel of futuristic fiction, the impact of which lasted for nearly a century. See Clarke, I F, Ibid, pg 118.

3. Clarke, I F; Ibid, pg 118.

4. See Goodwin, B, and Taylor, K; Ibid, pg 9-10

5. See Thomson, D; Ibid.

6. Fussell, P; The Great War and Modern Memory, New York, Oxford University Press, 1975, pg 36.

7. See Fussell, P; Ibid, pp 36-74.

8. Mitford, N; The Pursuit of Love, Harmondsworth, Penguin, 1945, and
Mitford, N; Love in A Cold Climate; Harmondsworth, Penguin, 1949.

9. Clarke, I F; Ibid, pg 225.

10. Fussell, P; Ibid, pp 155-157.

11. Fussell, P; Ibid, pg 158.

12. Sassoon, Siegfried; To Victory

13. Owen, Wilfred; Anthem for Doomed Youth

14. Sassoon, Siegfried; The Rear-Guard

15. Fussell, P; Ibid, pg 29.

16. Shanks,E; The People of Ruins, 1920; see Clarke, I F; Ibid, pg 227.

17. Russell, B;. Icarus, 1924, pg 62-63.

18. See Thomson, D, Europe Since Napoleon, Ibid, 1966. See also
Benns, F, and Seldon, M; Europe 1939 to the Present, New York, Appleton-Century-Crofts, 1965.

19. Oxford English Dictionary, Oxford, Clarendon Press, 4th edition, pg 631.

20. Traverson, E; Immigration: A Study in American Values, Boston, D C Heath and Co, 1964, pg 75.

21. Huxley, A; Crome Yellow, London, Chatto and Windus, 1921.

22. Huxley, A; Brave New World, Harmondsworth, Penguin, 1974, pg 187.

23. Huxley, A; Brave New World Revisited, Harmondsworth, Penguin, 1965, pg 11.

24. See Lilen, H; Introduction á la Micro-informatique du Microprocesseur au Micro-ordinateur, Nancy, Berger-Cevrault, 1977.

25. Huxley, A; Brave New World, Ibid, pg 87.

26. Huxley, A; Foreword to Brave New World, 1946, Ibid, pg 9.

27. Crick, B; George Orwell, A Life, London, Secker and Warburg, 1980, pg 395.

28. Crick, B; Ibid, pg 2.

29. Crick, B; Ibid, pg 2.

30. Crick, B; Ibid, pg 394.

31. Rose, M; Ibid, pg 3.

32. Orwell, G; Nineteen Eighty Four, Harmondsworth, Penguin, 1984, pg 34.

33. Orwell, G; Ibid, pg 11-12.

34. Orwell, G; Ibid, pg 257.

35. Orwell, G; Ibid, pg 257.

CHAPTER IV

APOCALYPSES OF DESTRUCTION AND REDEMPTION

We move now to the third period in the history of the genre, that is, the post-nuclear age, or the time when nuclear power became common as a source of energy, and a reality as a destructive force. It is the period after the nuclear blasts of Hiroshima and Nagasaki in 1945, when societies came to understand better than at any other time, that technology can have both good and evil uses, and the human race cannot be relied upon to use it only for good. Atomic power is an effective and cheap source of energy, but the effects of radiation and the dangers it brought with it were the harsh realities of Hiroshima and Nagasaki, as well as the disasters of Three Mile Island and the Nuclear Research Facility in Lucens, Switzerland[1], the longterm effects of which are still not entirely known.

The factors which distinguish this period, that is, the nineteen fifties and nineteen sixties, from the

previous ones are that the machine and the computer, or thinking machine advanced spectacularly and space travel became a reality. Thinking machines and space travel represent pinnacles of human achievement in science and technology; they are massive hurdles in the path of scientific advancement and knowledge which have been cleared, and no single symbolic step since then has been as great as these in the field of scientific discovery. Even though computers and space travel have been greatly improved in the twenty years they have been in use, nothing as symbolically important has occurred since then, and the world is still waiting for the next breakthrough.

1.0 Machines and Computers

Mark Rose has said that the role of machines in science fiction is a double one; "Machines typically mediate between the human and the non-human, serving as the agency through which man explores and protects himself from the cosmos. But at the same time, as versions of the non-human, machines may represent a threat to human values"[2]. In order to understand how machines

changed from being user-friendly mediators and servants of human beings to being a threat to human values (as Rose states), or threatening controllers of their makers, it is necessary to look at their history from the nineteenth century when a mechanical worldview prevailed[3] and the industrial revolution made people aware that theirs was the age of the machine[4], to the present day, when it seems that machines are no longer a threat in their own right[5].

1.2. Brief History of Machines

For Jules Verne, machines and technology were the tools of mankind, enabling humans to conquer nature, and useless without humans, that is, scientific, modern humans, to operate them, whereas for later writers such as Arthur Clarke, they became a destructive force capable of plotting against and wiping out mankind[6]. It took another twenty years for this threat to become less real; as computers became more and more advanced as artifical 'brains', it was realised that it has not become possible yet, and probably will not for a very long time, to create an

artificial 'brain' with an imagination. Until this happens, humans seem safe from the threat of computer take-over[7].

The second Industrial Revolution in the mid-nineteenth century in England changed the face of the country in a remarkably rapid and rather unpleasant way[8], and the images of the Industrial Revolution were not attractive. Dismal, grim factories scarring the landscape, pollution, workers no more than slaves who worked for a pittance under appalling conditions with no security or rights whatsoever, were all the realities of the time and have remained the images which immediately spring to mind when people today think of the Industrial Revolution[9]. The workers slaved at machines for abysmal wages, while the capitalist bosses who owned the factories and the machines reaped the profits. It is hardly surprising that machines and the effect they had on the country and the workers were not regarded with anything like favour, except by the owners of the machines themselves. John Ruskin[10] took up the fight against all machines with almost religious fervor, his main

objection being their de-humanising character which alienated man from his environment. Ruskin saw industrialisation as an evil, de-humanising force, and not progressive in any sense. The extreme contrast of the industrial factory with the rolling green fields of the English countryside which the industry was destroying was the target of much social criticism from this time, right up to the present, and has resulted in popular conservation movements to protect the environment, as well as the workers' place in it. But the tragic irony of industrialisation was that man could not find a way to harness the power of machines without being himself bound to these machines[11].

As technology advanced, machines became smaller and more efficient[12]. The first radio was an enormous structure of valves, then the size was reduced hundreds of times as the valves became smaller and transistors replaced them. Today, the working parts of a radio fit into an integrated circuit half the size of a postcard, and soon, they will be in one tiny silicone chip[13]. In the same way, computers developed from the enormous structures the size of a

building, to the present day calculators and micro-computers. When the computer was invented, the notion that it could take over and control humans was seen as a threat which does not seem to exist anymore. As previously mentioned, it was realised that a machine lacks one essential ingredient, and that is an imagination. So far, it is not seen as a possibility that a computer with an imagination can be built, though more and more functions become possible as more and more advanced computers are produced all the time. The only evil in the machine seems to be what has been put there by humans. A computer 'thinks' and reacts only in the way it has been programmed, and until a program with an imagination is invented, the world seems safe from the take-over by machines.

1.3. Machines and Views of the Future

IF Clarke has identified the difference between the English and American views of the future, the American being the root of the 'thinking machine' idea:

> The English tale of the future has produced the most convincing prophecies of political oppression, and the Americans have written more widely and with greater effectiveness about the repressive potentialities of the mechanised society. These appear as nightmare fantasies of the computers and the robots that nullify the American dream of the free, spontaneous and heroic life..... One reason is that ever since the construction of the first computer UNIVAC in 1950, the Americans have been living through the most extensive applications of computers in world history. They have in consequence engaged in the most serious debates about their uses and abuses, because the possibility of an automated world controlled by computers and data banks offends all that is personal and independent in the American tradition.[14]

It would appear however, that another reason for this difference lies in the different life experiences of the two nations. Throughout history, Britain has been involved in civil and territorial wars over land and government, such as the struggles for Scotland and Ireland, as well as the constant threat of take-over by countries such as Spain and France in previous centuries, and Germany in this century.[15] Britain still does not see itself as one nation; even today the

English think of themselves as very different to the Scottish or Welsh, and the Scottish or Welsh think of themselves as Scottish or Welsh, not English. The area of land the country occupies is small and exposed, and invasion used to be a real threat; so much so that the twentieth century has only changed this since the Second World War. Up until then, take-over by a foreign nation with foreign ideas and social systems posed a real threat. The Americans on the other hand, have not since the Civil War experienced this sort of disunity, nor have they experienced a direct threat to their shores,[16] and have never been invaded. The idea of a foreign take-over is unthinkable, because it is not seen as possible due to their size, position and strength. An oppressive political system is also unthinkable as it is a direct contradiction of everything America is supposed to stand for, as well as the Constitution, a document of almost sacred properties. Alien invasion from another planet seems imaginatively more likely to them than invasion by another country or the imposition of an unAmerican political system; when Orson Welles narrated H G Wells' War of the Worlds over the radio in nineteen thirty eight, the nation panicked as they could actually perceive of this happening. America is a large expanse of land where many cultures formed a new nationality. This seems to have

made them intensely patriotic towards the ideals of a free, democratic society to which very few countries pose any sort of threat.

2.0 Space Travel

Space travel is entirely dependent on thinking machines, from the large computers at the space stations on earth, to the microchips used on board the space-craft themselves. The microchip was in use in the early nineteen sixties in the research laboratories of the top secret American space programme, and this alone was the reason that America was the first to put a man on the moon.[17] Reaching the moon has a semi-mystical aura about it; in itself it is a symbolic apocalyptic device as it altered man's conceptions of space forever. If man can travel to the moon, the possibilities are infinite; if man can invent the technology to overcome the limits set by gravity and sheer distance, there is no reason why he cannot one day, overcome the obstacles in the way of travel to other planets and galaxies. Planets may be millions of light years away, but overcoming this is only as impossible as travelling to the moon was a hundred years ago.

Landing on the moon was symbolically the greatest

technological breakthrough made so far, and this, together with its semi-mystical aura made it an emotional event which reached almost mawkish levels of sentimentality, from the first words spoken on the moon, "one small step for man, one giant leap for mankind" to the message left behind by the astronauts in case other beings from other planets arrived later, "Here men from the planet Earth first set foot on the moon. July 1969 AD. We come in peace for all mankind"[18]. This is the enactment of all the science fiction fantasies about space travel, and the landing on the moon was a symbolic milestone on the road of scientific advancement. As already mentioned, it was apocalyptic in nature as it changed man's conceptions of space, but more importantly, in acting out scientific fantasies, the future became the present. Although this acting out was a physical reality and not in the imaginations of the people concerned, this is mythically and symbolically the same as biblical apocalyptic vision, as the Western world was living the future.

The reasons for sending men to the moon in the first place can only be speculated upon. Why did the

Americans think space travel important enough to spend billions of dollars on it and millions of manhours in research ? It would seem that the reasons were complex. First of all, the recovery after the Second World War and the Korean War had been virtually completed, the Western world was on the crest of an economic boom which meant there was plenty of money available to finance such a venture. More importantly though, it seems more a question of national pride. America saw itself as the leader of the free world; biggest, best and most advanced. Russia on the other hand, was seen by America as the epitome of the enslaved world of communism, yet the Russians were the first to put a man in space in the form of Uri Gargarin in 1957. This was a terrible blow to America who saw itself as the nation of the future, and the race was on. The space race was important enough to America's pride as leader of the free world and leader in scientific and technological advancement for the Americans to delay the disillusion they were to feel with the plastic world of technology for ten years. When the disillusion came, along with a foreign and very bloody war which divided the nation as no other issue had divided it for

generations, the rebellion was a large one and it came mainly from the nation's youth[19]. American university campusses in the late nineteen sixties were notable for the constant demonstrations against their country's involvement in Vietnam and together with this, was a rebellion against the plastic world of technology with its false values and material outlook. Once the Americans had put a man on the moon, space travel lost appeal somewhat, as it was wasteful of energy and resources and in the economic recessions of the nineteen seventies, other things were seen as more important. A large number of people felt the money involved could be better spent on ecology, education and aid programme.[20] The rejection of technology straggled on into the nineteen eighties, with an emphasis on health and against all unnatural aspects of life. This does not mean that technology has been rejected outright; information technology and micro technology has boomed, and the demand increases annually. It would seem that a more moral attitude has been the outcome, and destructive and damaging technology has been rejected[21]. Frantic efforts are now being made to reduce the damage done so far, and to prevent any more damage to individuals, society

and the environment.

3.0 Characteristics of this Period in the History of the Genre

The most important science fiction works of this period are those in which technology has been rejected, or more specifically, the destructive aspects of technology have been rejected and the human race has gone beyond the limited capabilities of machines. For example, in 1963 Frank Herbert published the first of the Dune series, and in this work, man has decided that computers are so limited and incapable of thought, as well as the notion that man had become enslaved to them, that a race of "Mentat" or human computers had been developed. "Then came the Butlerian Jihad - two generations of chaos. The god of machine-logic was overthrown among the masses and a new concept was raised: 'man may not be replaced'"[22]. These human computers have been trained since birth to be able to carry out the functions of computers, but are vastly superior to computers because they have imaginations; they can therefore probe more

deeply into thought processes than the best computer ever could.

It is this inversion of technology and machines as they had been portrayed in earlier works, and the double inversion back to the supremacy of the human mind which is the most significant apocalyptic feature of this period of writing, where the line between human and non- or super-human has been very finely drawn and the categories themselves have been inverted. The second significant feature is that of space travel; not the space travel of early writers, but the leaps in time and millions of light years in (at the most) a few hours. They can therefore travel between the galaxies with incredible ease. The third feature is their distance from the present day in terms of time. They are not set a few thousand years hence, but hundreds of thousands of years, from where the twentieth century CE is a distant speck in history, and not a very significant one at that. For a world which sees its history as the last few thousand years, this is a very effective technique of displacement and inversion; current

ideas of time and eternity are turned upside down as twentieth century humans are forced to come to terms with the realities of millions of years and millions of miles away from present time and present conceptions of space and eternity. Far from being the centre of the universe, Earth is either so far away that it is one the periphery of the galaxy and of no importance whatsoever, in another galaxy altogether and never mentioned, or it has 'died' or become exteinct. This is a radical apocalyptic displacement of the heavens and the earth, in which popular conceptions of the central dimensions of prevailing worldviews are inverted.

4.0 Frank Herbert

In writing Dune which was published in 1963, Frank Herbert created a new society with its own mythology, worldview and religion in a galaxy far removed from both the time and the space of the twentieth century on earth. It is an apocalyptic story of the struggle between good and evil, and the promise of a better world in the face of the crises the universe is under-

going in some unspecified time in the future. Characteristic of the third period of the genre of science fiction, displacement is more radical than any which had gone before; there is no sublety involved in the inversion techniques used by Herbert, and this would seem due to the radical changes with which the human race has had to contend in the twentieth century. The fulfillment of science fiction fantasies of the past seems to have called for something as dramatic, complex, and final, similar to the Apocalypse of St John, where previous promises had not been good enough. Dune is a fantastical tale of almost Gothic proportion in its inventiveness and creation of totally new ideas of world-views and political, economic and social history. It concerns a Messiah, one Paul Muad-Dib, who has been promised for centuries as the one who will deliver the opprssed from the wicked, and who will rule with righteousness. He is of royal blood, but at the same time, he is super-human; no man like him has existed before and is unlikely to exist again. He has powers beyond the accepted powers of intellectual awareness of the order of Bene Gesserit nuns, thought of as witches, and he is in every

sense a Messiah.

Herbert, through effective displacement of the dimensions of time, space and classification, provided an alternative apocalyptic promise relevant to the secular world which had lost its sense of direction and which feared for the future. Redemption, or the promise of redemption, is the most significant feature in describing this type of apocalyptic promise.

4.1. Time

Dune was not set in any clear date in the future and Herbert used this technique as a displacement and inversion device. The reader knows that it is thousands, perhaps millions of years from the twentieth century CE, but has no idea when the events were located. The reader knows that Paul Muad-Dib was born in the fifty seventh year of the Padisha Emperor Shaddam IV; the religion of Bene Gesserit witches which took over two thousand years to develop; and

even though Yeuh Wellington lived from the year "Standard 10 082" to the year 10 191,[23] there is no indication how eras were measured or even if the years can be counted from the twentieth century. The inversion technique used here is that short periods of time, that is, anything less than a generation, do not matter in the long course of history. There is a strong sense of history in the book in terms of destiny, events, governments, prophecies and messiahs, but without the locating of history in a specific time pattern. History, to twentieth century people is the locating and explaining of events in their time sequence, the time being as important as the people and the events. In Dune however, the fact that Paul Muad-Dib arrived is important, not when he arrived. His arrival was timely, and that is enough.

Paul Muad-Dib is the Messiah, the long awaited Kwisatz Hadderach, a male Bene Gesserit whose organic powers of the mind would bridge space and time (in the words of the Bene Gessrit), or Mahdi, the one who will lead the Fremen to paradise (in the words of the Fremen).[24] He is the mediator with royal functions

of religious apocalyptic literature who will overthrow the wicked that is, the Harkonnen, and the corrupt, that is, the Emperor and the Guild, and reign with righteousness. He is able to do this as he has survived the Water of Life, an awareness spectrum narcotic produced from a drowned sandworm. He can bridge space and time; he can see into the past or future, and into the next room or planet millions of miles away. He can bridge time, but the reader is never sure what the timespan is; whatever past he sees is not located in its setting and the future could be five minutes or five thousand years away. In the same way, Paul and his family, travelled from the planet Caladan to the planet Arrakis, a great distance, but the journey was not explained in terms of time. At the end of one chapter of the book the family is about to leave Caladan, and at the beginning of the next they are in Arrakis, in the Great Hall of their palace, but the reader has no idea how long it has taken to travel there.[25]

In the genre of science fiction generally, space travel is timed so that first of all, the reader will be impressed at how short a time it takes to cover enormous distances in the future, and in the second place,

to locate the travellers' journey in some sort of timespan. Humans like to know when and where, how and who, and for any of these to be left out is an effective technique of displacement as it renders the reader insecure when he/she cannot be slotted into a neat compartment[26]. Ignorance and randomness are unsettling, everything should be in its place in order for there not to be chaos - the centre of a worldview.

4.2. Space

The dimension of space is central to the Dune story. not just because of the physical space travel which occurs from planet to planet, but more importantly, it is seen as central to the religion of the people as well. The inverted worldview in terms of space is reconfirmed through the religion, in which space is seen as almost sacred. "Mankind's movements though deep space placed a unique stamp on religion during the one hundred and ten centuries that preceded the Butlerian Jihad. To begin with,early space

travel, though widespread, was largely unregulated, slow and uncertain, and before the Guild Monopoly, was accomplished by a hodgepodge of methods. The first space experiences, poorly communicated and subject to extreme distortion, were a wild inducement to mystical speculation.

"Immediately, space gave a different flavour and sense to ideas of creation .... All through religion, the feeling of the sacred was touched by anarchy from the outer dark."[27] In other words, understanding and controlling space had a mystical flavour and became part of the religion. Just as space is crucial to any worldview, this crucial factor became formally part of the religion. Space travel enabled the darkness and unknown of the periphery of the universe to become known and unalarming, as well as controlled, and this inversion technique is similar to the one used by Jules Verne, but Herbert took this concept further in Dune as he never actually stated where the boundaries which have been shattered are. The reader knows that Arrakis, known as Dune, is the third planet of Delta Pavonis, and the Geidi Prime is of Ophiouchi B (36), but no further information is

given. The reader is not told what the other planets are, or where they are, or even what 'B(36)' means. This is an alienating tactic which inverts known and unknown space more effectively than simply inverting the boundaries. On the planet Arrakis however, this technique is not used, and more 'classical' inversion occurs. The reader is made familiar with the geography of Arrakis and is even provided with a map. Apocalyptic inversion occurs as Paul's family, instead of arriving and making their home at Carthag, the capital city built by the Harkonnen, they decided to choose Arakeen which had been the centre of trade and commerce of the planet for some time in the distant past, though the reader is not sure when. This alters the centre and periphery of the planet straight away.

But there is also an inversion of the known and the unknown in terms of space on the planet Dune. No man had ever gone into the deep desert; only as far as the second zone. However, when Paul survived the Water of Life and the sandworms had saluted him as the Mahdi, he could and did go there with their help. Thus, limits and boundaries are changed and

inverted and the unknown became the known.

4.3 Classification

Herbert divided the categories of human and non-human not just in terms of people and machines,("thou shalt not make a machine in the likeness of man's mind"[28]) but he took the category human and divided this further, so that the word 'human' did not mean homo sapiens, but rather noble, good and honourable homo sapiens. A non-human was not a person, but an ignoble, dishonourable and base person. In the book, people were tested to discover if they were human or not. "Why do you test for humans ?" 'To set you free" "Free ?" Once men turned their thinking over to machines in the hope that this would set them free. But that only permitted other men with machines to enslave them .... the original Bene Gesserit school was directed by those who saw the need for a thread of continuity in human affairs. They saw there could be no such continuity without separating human stock from animal stock - for breeding purposes'".[29]

'Humans' as Herbert used the term, were those who were above the animal passions and who had mastered the basic animal ways. Their minds contained noble emotions such as honour, courage, loyalty and strength, instead of cowardice, fear and weakness. They were trained in one of the many classifications of people, such as Mentat, the human computers, Bene Gesserit witches, imperially conditioned doctors, or Sardukar, imperially conditioned warriors. There are no normal people as main characters in the book, that is, people 'like us'. They all have their special powers which they have learnt through knowledge; they were taught and trained to carry out specific roles in society. Each of these categories of people are alien, and therefore slightly threatening to the reader. Such a highly organised society is similar to the worlds of Nineteen Eighty Four and Brave New World, where freedom of the individual does not exist and everything is organised for the good of society. As previously mentioned, this is an effective inversion of the norms and values of society as it is in the twentieth century.

The most valued and feared power in the future world of Dune is not intellectual/scientific (as in the twentieth century where the scientists and technologists are most valued and feared because of their ability to turn their backs on society and destroy it), but rather intellectual/spiritual, and it is the privilege of the Bene Gesserit witches. It is feared because it is not understood; it is mystical and therefore thought to be witchcraft. It is based on energy within the body which can be channelled for a variety of uses, and it is feared because it is very difficult, if not impossible to lie to a Bene Gesserit witch, as part of the training is in the minutiae of observation and not even motives can be hidden from them.

This 'otherness' of humans, not machines, was an effective method of inverting groups, so that the normal became abnormal. People did not choose what they wanted to do with their lives which is an alien thought in the twentieth century Western World. They were trained to fulfill a particular role and function in society, for the good of society and not

the individual. Machines were no threat - the threatening aspect of machines had been transferred to the people, and there was a constant emphasis on the possibility of treachery. It is human treachery however, not the treachery of machines.

Another inversion of the categories of people is the re-instatement of royalty as leaders of the people. By 1963 when Dune was written, royal families throughout the world had lost their clout as political figures. Democracy, socialism and the idea that the most competent should rule (whether they did or not), had been put into effect and royal families and aristocracy had been reduced to figureheads only. The power they had wielded in the centuries before the present one had become a thing of the past. Earlier works of science fiction had followed this pattern and leaders were non-royal, either generals and military men, or men who had been elected democratically; in fact the same type of leader with whom we are familiar in the twentieth century. Herbert inverted the familiar here by reverting to royal houses and lineages, emperors,

barons, dukes and princes, all of whom were regarded as the legitimate leaders, and as far removed from the people who ruled as the despotic royal families of the last few centuries were. An interesting point is that the people were not aware that their emperor was actually under the control of the Guild. This is a double inversion of the category of ruler/ruled; the reader does not know who the Guild were, but whoever they were, the emperor had no choice but to obey them and was merely a puppet in their hands. The Guild directed the politics of the universe to their ends of commercial, economic and political control, but the emperor was not a figurehead; the people were not aware that he was controlled by some nebulous 'other' and as far as they knew, all decisions were his.

A final inversion of classification is that of the animal kingdom as it is known in the twentieth century. The sandworms are inversions of animals; all animals on earth need water in order to survive. Desert animals and plants have evolved to the extent that the amount they need is minimal, but they still need this minimal amount in order to survive. The

sandworms on the other hand, are in direct contrast to this; water is poisonous to them and they die if they ever come into contact with it. Humans cannot conceive of any type of animal to whom water is a deadly poison, and this is therefore an inversion of animals. The fact that the worms and not snakes, even though some are over 400 metres in length, adds to the effectiveness of this inversion, where worms are thought of as very small, a few inches in length at the most.

Frank Herbert therefore, created a totally new society with structures, lifestyles and people who are totally different to Earth of the twentieth century. It was done through the radical displacement of groups, all in a manner relevant to the twentieth century and the crises the world has been experiencing since the nineteen fifties. His work was apocalyptic, as through this radical displacement, it provided an alternative mythic promise of a new heaven and a new earth, all within the secular environment of the twentieth century.

5.0 Isaac Asimov

Isaac Asimov obtained a doctorate in Chemistry in 1949 and was an Associate Professor of Biochemistry at Boston University School of Medicine until 1958, when he left to pursue a writing career full-time.[30] His Foundation series has become a classic within the genre of science fiction, and he is considered to be one of the top authors in this field today, and has won the Hugo Award twice and the Nebula Award once. He has openly admitted that the Foundation series of books was based on the Fall of the Roman Empire[31] but the books are no less original for this.

Foundation was set in a galactic empire of twenty-five million planets, control over which became more and more difficult and it started to crumble. Hari Seldon, founder of the Foundation for the Enclyopedia Galactica, had through psychohistory managed to predict both the time and the manner in which the empire would finally collapse, and he managed to persuade the empire rulers to agree to the establishment of a Foundation for this encylopedia, on a planet at the

periphery of the galaxy, called Terminus. The writing of an encylopedia was a guise for the real purpose of Hari Seldon's Foundation, which was the manipulation of the future so that the period of barbarism which inevitably lasts for thirty thousand years after the fall of a galactic empire, will last for only one thousand years. Psychohistory, "the human instrument for contending with entropy"[32] is the manipulation of historical principles and laws in order to ensure the continuation of the human species with as little destruction as possible. It is interesting to note that the works of the previous period of science fiction, namely Brave New World and Nineteen Eighty Four, contained societies which had developed strategies for the manipulation of the past, but in Foundation, the people had developed a strategy for manipulating the future. Both of these manipulations are in themselves apocalyptic, as conventional understandings of the past and the future are in each case, effectively inverted. Psychohistory enabled the people to predict with alarming accuracy, how society would behave under

any given conditions, and they could read the future in the way humans of the twentieth century can read the past.

5.1 Time

Asimov treated the dimension of time in Foundation in a similar way to Herbert in Dune, that is, historical time was vastly expanded to assume the proportions of cosmic time. History, instead of consisting of a few thousand years (which is they way it is seen in the twentieth century) consisted of millions of years of known time. A period of barbarism lasting one thousand years was considered to be a speck in history which is not very important, but if it should last thirty thousand years, this would be a problem as most of civilisation would be lost.

Continuing in this vein, the heroes of the book Foundation did not last very long. In the beginning, the reader meets a character called Gaal, a young man who was on his way to Trantor, the administrative

planet of the galaxy, in order to take up employment with Hari Seldon at the University. Gaal is introduced as a main character, but he disappears at the end of the first chapter, never to appear again, and the reason for this is the enormous leaps in time from chapter to chapter in the novel. Fifty years have passed between the first chapter and the second; Gaal is dead and new characters have taken his place as principal characters in the next chapters. Only one character lasts until the third section of the book, that is, Salvor Hardin, who was a very young man in the second, and an old man in the third, thirty years later. These jumps in time are effective inversions of the normal passage of time in literature. Short novels usually introduce characters who remain central characters throughout, though this may not be the case in books such as family sagas which span generations, but these would be three times the length of Foundation.[33] Consistency is not apparent in Foundation, and the reader has to come to terms with great time-leaps in which familiar characters are no longer in existence and new ones appear.

Time is also inverted in terms of time travel. In a galaxy of twenty-five million planets, millions of light years away from each other, it was quite possible to travel from one planet to another in a few hours; "Space travel was all one whether one travelled half a million miles, or as many light years."[34] This is an effective inversion of how people see travel in terms of time. According to Einstein's theory of relativity, it is not possible to travel faster than the speed of light. This being the case, it would not be possible to travel to a planet a million light years away in a few hours. Yet this is exactly what the people in the time of the Foundation did, inverting accepted ideas of time, as well as of space:

> He steeled himself just a little for the Jump through hyper-space, a phenomonen one did not experience in simple interplanetary trips. The Jump remained, and would probably remain forever, the only practical method of travelling between the stars. Travel through ordinary space could proceed at no rate more rapid than that of ordinary light (a bit of scientific knowledge that belonged among the few items known since the forgotten dawn of human

> history), and that would have meant years of travel between even the nearest of inhabited systems. Through hyper-space, that unimaginable region that was neither space nor time, matter nor energy, something or nothing, one could traverse the length of the galaxy in the intervals between two neighbouring instants of time.[35]

In this way, Asimov turned conventional ideas of the dimensions of time and space around, so that what was accepted as scientific truth became no more than an outdated theory.

5.2 Space

The dimension of space has already been mentioned in the discussion on time in the previous section; vast stretches of unknown space became known, as humans became able to travel millions of light years in a few hours. The universe, seen as unlimited and strange, that is, not known or understood, had become a familiar thing, without mystery, myth or fear. The limits and boundaries of this world have been inverted so that new, vast and very different

limits have been set. The centre of the universe is no longer earth; earth is somewhere on the periphery of the galaxy and of no consequence whatsoever.

Another inversion of the spatial dimension is on the planet Trantor itself. Trantor was one enormous city which covered the entire planet and had six billion inhabitants. It also was covered by some sort of dome or lid, so that the inhabitants never had to go into the open air, and even flights from one part of the planet to another were within this enclosed space: "Gaal stared..... marvelling at the sensation of air flight within an enclosed structure."[36] At his hotel, Gaal wished to see the outside from the observation tower, and the room-clerk first had to check that it was not raining: "Good weather. Come to think of it, I do believe it's the dry season now..... I don't bother with the outside myself. The last time I was in the open was three years ago. You see it once, you know, and that's all there is to it."[37] Open and enclosed space are inverted here, so that it is normal not

to know open space on one's own planet, but at the same time, quite normal to be able to travel out into the void of unenclosed space. On Trantor everything had been turned inwards, and the planet was a mass of tunnels, underground buildings, and passages similar to a rabbit-warren. The highest point was the observation tower, and this was only five hundred feet above the ground. Unless someone wanted to, it would be very difficult to ever see the open sky: "If you're born in a cubicle, and grow up in a corridor, and work in a cell, and vacation in a crowded sun-room, then coming up into the open, with nothing but the sky over you might just give you a nervous breakdown."[38] The inhabitants of Trantor therefore, regarded the open space of their own planet as something strange and unknown, but were quite at home in the darkness and vastness of the open space between the planets.

5.3 Classification

Categories of people were inverted in a subtle way in Foundation. The people themselves did not last

long in the story, but certain ones lasted forever for the impact they made on the society, similar to the heroes and mythical figures of the twentieth century. Hari Seldon and Salvor Hardin were quoted and remembered long after they had died, but the point was that people were not at all important, except for the functions they may have carried out in the greater scheme of things, similar in fact, to the dystopian novels of Brave New World and Nineteen Eighty Four. Hari Seldon, for example, had predicted the fall of the empire in terms of hundreds of years, and had manipulated future events so that the people who would live through them would have no option but to take a certain line of action; the one Seldon had predicted would be best for civilisation and this is why he was remembered. What is unusual is that the characters are not faceless or anonymous; they are real with characteristics and personality quirks, physical attributes and eccentricities, yet they last for a chapter or two, and then disappear for good. According to the society they are totally unimportant as individuals in the greater scheme of things, and yet Asimov has treated

them as if they are, a double inversion of the accepted ideas of man's place in the universe.

Just as in Dune, there are princes, lords and noblemen in Foundation, but whereas in Dune they could have been good or evil, in Foundation they are all evil. The good people, in other words the people 'like us' are those who were preserving Hari Seldon's Foundation, not the rulers and petty landlords and noblemen who were supposed to rule the planets. There was no noble ruler on Terminus, the planet of the Foundation; it was populated only by the society created to compile the Encylopedia and the leaders were elected in a way similar to the democratic societies of the twentieth century. The constant struggle between the nobles of other planets such as Anacreon, and the 'good' scientists on Terminus is the classic dialectic between good and evil. Even though individuals did not matter, the thread of good ran down the generations and those who knew of Hari Seldon's real plan, followed out his instructions in trying to save civilisation.

Good therefore, was almost an independent force in itself; it carried on regardless of who was there to operate it, as the people had no choice but to follow out Hari Seldon's plan. He had organised events so that his plan was the only way out of any particular crisis he had foreseen.

The division between human and non-human, or man and machine, was dealt with again in a similar fashion to Dune, in that machines were no threat to the empire. Atomic power was used on some planets and was valued as a source of energy, but on others such as Trantor, it had become too expensive and was relatively outdated. It was not however, regarded as a danger or a means of destruction. The rulers of Anacreon wanted the atomic power plants the scientists had on Terminus, but this was for energy, not for use as a weapon. Other forms of mechanisation and technology appear constantly; huge spaceships which carry thousands of tons of trading goods as well as people were always in use, but as tools of the people, useless without people to operate them, and in themselves, no threat.

6.0 Conclusions

In these apocalyptic novels of destruction and redemption it would seem as if the world, through the idea of redemption, has moved from the notion of ultimate destruction or ultimate organisation of repressed societies, to the idea that survival might be possible after all. Books such as Dune and Foundation seem to place the chaos and meaninglessness of the twentieth century into some sort of perspective in the greater pattern of the universe. This is a description of the 'correctness' of the struggle for a better world, or in apocalyptic terminology, a new heaven and a new earth. The longing for a new age in the face of the inability of the human race, with all its scientific knowledge, to make the world a better place continues in a secular search for an apocalypse which will restore order and rid the world of the evil it contains.

The quest is all important; to admit defeat would be functionally similar to the fulfillment of the apocalyptic promise. Both the fulfillment of the

promise and the abandonment of the quest imply that the dynamic tension within the situation would be dissolved, and a static situation would occur. As warned by H G Wells, a static situation leads to decadence and then to decay. As long as humanity continues the quest for a better future, the dynamic situation is maintained and the apocalyptic promise is still effective.

The modern world in which space travel and the thinking machine have become a reality needed a confirmation of those realities which would reassure the popular imagination that the quest for a new world is both necessary and correct, as well as provide a frame of reference for the crisis of the twentieth century, in which the destructive powers of the machines human beings have created have become obvious. Both Dune and Foundation provide this in terms of an apocalyptic promise of radical displacement of the dimensions of time and space, and the classification of groups, so that redemption becomes possible after all, and a new heaven and a new earth may come.

Herbert and Asimov firstly encompassed the upheavals and changes of the nineteen sixties by using the most drastic of those changes, that is the advent of space travel and the development of computers, and secondly, by radically inverting the categories in the dimensions of time and space, and the classification of groups, and in doing this, wrote effective apocalyptic literature of destruction and redemption.

FOOTNOTES TO CHAPTER IV

1. Croall, S, and Sempler, K; Nuclear Power for Beginners, London, Writers and Readers Publishing Co-operative Society, 1978, pg 41.

2. Rose, M; Ibid, pg 139.

3. Rifkin, J, and Howard, T; Ibid, pg 5.

4. See Clarke, I F; Ibid, pp 117-142.
   See also
   Barbour, I; Technology, Environment and Human Values, New York, Praeger, 1980.

5. See Lilen, H; Ibid, pp 9-32.

6. Clarke, A; 2001: A Space Oddyssey, a film by Stanley Kubrick, 1969.

7. See Lilen, H; Ibid, pg 9-32.

8. See Hobsbawm, E; Ibid, pg 109-133.

9. See Hobsbawm, E; Ibid, pp 109-133.
   See also
   Bernal, J; The Social Function of Science, London, Routledge, 1939.

10. See Hobsbawm, E; Ibid, pp 109-133.

11. See Rose, M; Ibid, pp 140-175.

12. See Lilen, H; Ibid, pp 34-58.

13. See Lilen, H, Ibid, pp 59-119.

14. Clarke, I F; Ibid, pg 275.

15. See Thomson, D; Ibid, pp 24-255.

16. See Traverson, E; Immigration: A Study in American Values, Boston, D C Heath and Co, 1964.

17. See Lilen, H; Ibid, pp 59-119.

18. Clarke, I F; Ibid, pg 290.

19. See Rosznak, T; The Making of a Counter Culture, Reflections on the Technocratic Society and its Youthful Opposition, Garden City, New York, Doubleday and Co, 1969.

20. See Rosznak, T; Ibid, pp 178-204.

21. See Rifkin, J, and Howard, T; Ibid, pp 84-93.

22. Herbert, F; Dune, London, New English Library, 1965, pg 476.

23. Herbert, F; Ibid, pg 41.

24. Herbert, F; Ibid, pp 488-498.

25. Herbert, F; Ibid, pg 49-50.

26. See Redfield, R, The Primitive Worldview, Ibid, pp 30-36.

27. Herbert, F; Ibid, pg 476.

28. Herbert, F; Ibid, pg 17.

29. Herbert, F; Ibid, Pp 17-18.

30. Asimov, I; Asimov on Science Fiction, London, Panther, 1984, pg 1.

31. Kreuziger, F; Apocalypse and Science Fiction; A Dialectic of Religious and Secular Soteriologies Chicago, Scholars Press, 1982, pg 46.

32. Rose, M; Ibid, pg 39.

33. Family Sagas, such as John Galsworthy's Forsyte Saga, are over 1 000 pages in length, while Asimov's Foundation is less than 200 pages.

34. Asimov, Foundation, London, Granada, 1979, pg 8.

35. Asimov, I; Ibid, pg 8.

36. Asimov, I; Ibid, pg 11.

37. Asimov, I; Ibid, pg 13.

38. Asimov, I; Ibid, pg 15.

CHAPTER V

SECULAR APOCALYPTIC LITERATURE

It would seem therefore, that apocalyptic is fundamentally a religious strategy of re-orientation and reclassification of a prevailing worldview through the inversion of the dimensions of time and space, and the classification of groups which make up that worldview. It would also seem that science fiction is an attempt to rationalise mankind's relationship with the ultimate reality and to place mankind in some sort of perspective and meaningful existence in the world. This functional description of science fiction could serve as a description of religion itself. In conclusion, we must examine the nature of science fiction further in order to show why it is specifically apocalyptic, rather than simply religious in some general sense.

The essence of apocalyptic is its immediacy; it differs from prophecy in that it becomes the here and now, not some nebulous, distant time and place in which the ways of the world will change. As already stated in Chapter I, in religious apocalyptic it is essential for the believers to act out the apocalyptic promise as if

it has already happened. Immediate, drastic change is both desirable and necessary in order for the crisis in which the people found themselves, to be dealt with, and by acting it out, the people have caused that apocalypse to happen. The changes envisaged are drastic, total and uncompromising, and the promise inverts the world so that commonly held ideas and worldviews are no longer relevant. It is a dynamic process in which the tension of opposites plays a vital part. At the heart is the ultimate dialectic between good and evil, and as long as this dialectic is maintained, the apocalyptic promise still holds and is effective. In other words, the proleptic nature of apocalyptic promise is the means or catalyst through which the tension between good and evil is maintained and the promise is effective.

David A Halperin has said that "science fiction developed in the hands of Verne and Wells..... (who) confronted the profound changes industrialisation imposed on the Western world in the late nineteenth century."[1] Verne and Wells tried to make sense of the extremely rapid changes occuring at the time,

in order that society would be able to withstand the crisis of technology. Science and technology were the great unknown; a force which took the world by storm and was running away with itself so that society could not keep up with or understand the changes it brought with it. Technology and progress were seen as synonymous, and although violent protests were made against technology and machines, so-called progress continued with relatively few setbacks, right into the twentieth century. Urbanisation was not a pretty sight; towns such as London and Manchester contained filthy slums, overcrowded and riddled with disease, poverty, crime and extreme squalor, and it is interesting to note that in the Victorian era, in England, anything bad, wicked or evil was described in terms of dirt. Criminals were the scum of the earth, the slums were sewers or stagnant pools of slime, homeless street urchins were sewer-rats, and prostitutes were vermin, all well-known images of urban decay.[2] This type of language was considered quite normal and much of it has survived to this day. What has changed is society's conceptions of evil and crime. For example,

the theft of a loaf of bread was considered wicked in the nineteenth century and could result in banishment to a penal colony in Australia, whereas today, society's conceptions of wickedness have changed, and such a punishment would be regarded as far too severe for such a petty offence. In the same way, the abolition of the death penalty in Britain in the nineteen sixties shows that notions of crime and punishment have changed and society is more tolerant and understanding of the social and psychological causes of crime and evil.[3] The Victorian images of urban decay have survived, but ways of dealing with it have changed, with the emphasis on reform rather than punishment. This is similar to the issue of change and persistence of symbolic forms in the history of religions. In the genre of imaginative literature, the secular form is what has changed from the religious, while apocalyptic is what has persisted. The nature of society changed from the late nineteenth century through the twentieth in that the popular imagination started seeing the world id a different, that is, a secular light. In the same way, the nature of evil has not changed, how it is

understood and dealt with is what has changed. Just as new interpretations of religious visions of the apocalypse were needed to accommodate the changes society was undergoing in order to make sense of and understand those changes, so were new interpretations of the nature of evil needed to accommodate the changes brought about by an increasingly secular worldview where crime was no longer considered to be the work of the devil, but a combination of an individual's psychological make-up and the circumstances surrounding the crime.

An important feature of an apocalypse is that it is thought to 'clean up'; it is a cleansing and purifying agent, ridding society of evil and dirt through the destruction of the old and the creation of a new heaven and a new earth. Apocalypses are perceived as essentially good, and therefore are symbolised as a cosmic cleansing. Images of whiteness, purity, fire (a cleansing agent) and cleanliness abound in religious visions of the apocalypse, all of which re-inforce the good, that is the correctness of the new order. For example, in the Revelation of St John the Divine, the

Son of Man appears; "His head and his hairs were white like wool, as white as snow; and His eyes were as a flame of fire; and His feet like unto fine brass, as if they burned in a furnace..... and His countenance was as the sun shineth in His strength," (Rev 1:14-16); "To him that overcometh will I give to eat of the hidden manna, and will give him a white stone," (Rev 2:17); "They shall walk with me in white, for they are worthy," (Rev 3:4); "He that overcometh, the same shall be clothed in white raiment," (Rev 3:5) and; "Seven angels came out of the temple..... clothed in pure and white linen," (Rev 15:6). In this way, symbols of purity and cleanliness underpin the good in a religious apocalypse.

In the same manner, secular apocalypses also 'clean up'. Order and system are arranged out of the seemingly random and chaotic, and together with this order comes the pure, clean and good. Mary Douglas has said that "dirt is matter out of place"[4] which in itself implies chaos. This chaos or wrongness has to be eliminated before good and right

can prevail. In the works of Jules Verne, nature is pure and uncontaminated and this purity is re-established by the triumphs of science. Science is not seen as a contaminating agent; the ignorance and barbarism of mankind before gaining scientific knowledge was the contaminating, disorderly element, and science and scientific knowledge re-establish order out of the darkness and chaos of ignorance. H G Wells on the other hand, treated science as a power which had to be controlled. Without control, science in the hands of mankind could result in chaos and destruction. His works were a series of 'what ifs'. What if scientific power fell into the wrong hands; what if there was threatening life on other planets; and what if other planets invaded the earth? For Wells therefore, science was only a purifying agent when under control and in the right hands. His message was more subtle than Verne's, and he seemed to be saying that science is a catalyst only and could be used for good or evil ends. In his books, purity and cleanliness are found in places where good use has been made of science, and dirt and evil lurk beneath the surface, ready to re-appear

and convert the world to chaos when restraint and control are loosened. For example, in The Time Machine, the world of the Eloi is clean and beautiful, but the underground, twilight world of the Morlocks is dirty, rife with vermin and filth. Yet the Morlocks are really the powerful beings and it is only a matter of time until they take over completely. They lurk on the edges of the Eloi society, a constant threat to the genteel order which prevails, by the skin of its teeth, for the meanwhile.

Another feature of the apocalyptic genre is its collectivity. The individual is lost within the salvation of the group or collectivity. This is clear in both the second period of the genre, that is in the dystopian works of Huxley and Orwell, and in the third period, in the works of Herbert and Asimov.

As we saw in Chapter III, a utopia is "a form of political theory with unique characteristics, (the most important of which is) the rejection of individualism and its replacement by some more collective

form of organisation, and whose special advantage is its ability to transcend the ubiquitous, unassailable present."[5] We also saw that it involves an element of the fantastical, and that these characteristics are all distinctly apocalyptic, and are as relevant to ironic forms of dystopia as they are to utopias. The ironical description of extreme organisation as is found in Brave New World is in fact, a description of the fulfillment of the apocalyptic promise and at the same time, a warning against it. As discussed in Chapter I, in the dialectic between promise and fulfillment, apocalyptic opts for the promise as it needs the constant tension to be maintained in order for the promise to hold true and have relevance to the society undergoing a crisis. In other words, acting out the promise as if it has already been fulfilled is functionally equivalent to actual fulfillment; when a situation is no longer dynamic it ceases to be effective as it leads to stagnation. In the same way, a total organisation of society leads to stagnation, the type of stagnation found in Brave New World and

Nineteen Eighty Four. Such societies do not grow or develop in any positive way. Having transcended the present they stagnate and lose their sense of history and identity, both of which in a dynamic context give life and hope to a society.

In both these dystopian novels the will of the individual is surrendered absolutely for what a few think is the good of society. The ironical element in a dystopian context is that it is not good at all. In the first book, happiness is a false, twisted emotion, and not real happiness at all. It is a drug-induced security blanket which blots out reality so that the people do not feel the need to question the structure of their society. In the second book, happiness simply does not exist at all in reality, but the people are told they should be happy because of all the Party has done for them. Instead of 'cleaning up', as apocalypses are supposed to do, the realisation of the apocalyptic promise has in the first case become so clean and pure that it is completely artificial, and (to the reader)

uncomfortable and unsatisfying. The 'dirt' is in the Reservation, yet to a twentieth century, Western person, the Reservation, although somewhat 'primitive' in that it has none of the conveniences of twentieth century life, is more natural and comfortable than the antiseptic world of Our Ford. This is an ironical inversion of apocalyptic thinking. In the second case, that of Nineteen Eighty Four, the apocalypse has failed to 'clean up' in any sense. The cities are filthy, sanitation and plumbing never seem to work properly, and there is a constant hint of nasty smells and rotting animal and vegetable life. The emphasis throughout is one of decay and rot, symbolic of what is happening in the society as a whole in Nineteen Eighty Four.

These visions of the future, distant, but not too distant, different, but not too different to our own seem to reflect the view of Western society in the context of the wars and disasters of the first half of the twentieth century. It seemed as if the world was heading towards the type of societies outlined in these dystopias, and it appeared

that very little was being done to stop it. In this mood of pessimism and disillusion, new developments and ideas were needed to turn myths of the future into acceptable visions again, and to restore the hope which had been lost in these apocalypses of irony and despair.

Hope was restored through the boom of the nineteen sixties, but not for long. After the Americans had landed on the moon, the destructive elements, that is the Vietnam and Korean wars, and the unhealthy elements, that is the plastic and artificial, disposable lifestyle, of technology were rebelled against in a serious way. The mood became one of caution, rather than of optimism or pessimism, and the attitude is now more realistic as society has come to know both the good and the bad possibilities of technology.

Nuclear power is a hard reality with the possibility of devastating consequences, and it is interesting to note that the most important science fiction written after the advent of nuclear power, are those

in which the societies have progressed beyond the use of nuclear power and computers. As discussed in Chapter IV, computers were rendered useless and nuclear power was regarded as an outdated source of energy in Dune, and people calculated the possibilities of psychohistory with the aid of a pocket calculator, and nuclear power is hardly used at all in Foundation as it is so expensive for that society. These could be examples of apocalyptic displacement (and therefore transcendence) of what is seen as evil power, that is, destructive and dangerous sources of energy, as well as thinking machines. In Dune, noble ideals and actions are strived for above the conquering of other planets, aggression and physical strength. The places of Paul Muad'Dib and the Bene Gesserit are all clean and pure; there is almost no water or botanical life on the planet Arrakis, otherwise known as Dune, but the desert and sand are not dirty. Dust is not dirt, it is pure and uncontaminated. The Harkonnen planet Giedi Prime however, is dirty, and images of dirty oil, disease (such as the Baron's festering sores), stickiness and pollution abound. Just as the enor-

mous planet-city of Trantor in Foundation is unclean, so is Terminus, the planet of the scientific foundation untainted and remains so in the quest for scientific truth on the one hand, that is the scientific truth of the enclyopedia, and the attempt to save the empire from total destruction on the other hand. Again pure and noble ideals, through symbols of cleaness and dirt are struggling for victory over the forces of danger, disorder and evil, all symbolised by dirt.

Another type of science fiction, also clearly apocalyptic in nature, and which has not been examined in any detail so far is the myth of the noble survivors. In its most common form, it is post-nuclear and in fact, post-apocalyptic, but examples can be found throughout the history of the genre, such as H G Wells' The Time Machine. In this novel, the Morlocks are a band of survivors of the nineteenth century, reduced to barbarism, living a twilight existence underground, in constant battle for survival. It would seem that this myth of survivors often appears in situations which are seen as hopeless in their totally destructive force. During the First World War for example, a

myth sprang up about a group of deserters from both sides who lived a wild and barbarous life, feeding on the corpses of soldiers and dead animals in the trenches, who used to come out at night to scavenge the battlefields, only to disappear again at dawn. The British soldiers half-believed this story, as they wanted to believe in the possibility of getting out; of surviving the hell which looked like it would never end, and they wanted to believe that there were some who had refused to continue fighting and living under the constant threat of a horrible death.[6] In the same way, nuclear fall-out, a totally destructive and annhilating blast cannot be seen by humanity as something which will wipe out the human race. In order for there to be hope, some people have to survive, and the common vision of their survival is that of a noble group, reduced to barbarism, but with the knowledge and capability of building a new civilisation out of this chaos. An example of this is Memoirs of a Survivor, by Doris Lessing, in which anarchy and decay are normal, and the people spend their whole lives desperately seeking shelter and safety which is always 'somewhere else'. Popular films have also

developed this theme. For example, the Mad Max series is a survivor myth in which hordes of people who survived the blast, or "poccy-lypse" as it is referred to, continually battle against each other in the wild and cruel landscape of the Outback in Australia. Max is the symbol of the force of good, fighting to prevent enslavement by the force of evil, that is, the tribes of leaders such as the Humungus and Aunty Entity. In this series, there is also a good and safe place 'somewhere else' and the people are always trying to travel there, though this is virtually impossible due to the waylaying of their caravans by bands of robbers and murderers, like futuristic highwaymen. In the film Zardoz, the place of safety, the Vortex, does exist, but it is practically impossible to penetrate its sonic walls. In this case, a group of survivors foresaw what was going to happen to the world and sealed themselves in the Vortex, a sort of scientific version of Noah's Ark, so that they can have a clean and good life inside while the barbarism outside rages on, and does not affect them at all.

This myth of the heroic survivors is a constant theme, both in the genre of science fiction as well as other literary genres, whenever total destruction is seen as a real threat. Humankind needs the hope that the destruction will not be final in order to give meaning to their worldviews in terms of continuity. Humans see themselves as located in a time-cycle or linear pattern, in which ultimate annhilation does not seem to fit. Destruction is only seen as good when destruction is necessary in order to bring in a new era. Total destruction is just that, the absolute end of the world. Apocalyptic destruction is a cleansing and purifying agent, a constructive thing out of which grows a new heaven and a new earth, and in order to do this, the dimensions of time and space, as well as the classification of groups, have to be inverted so that the very essence of their worldview is radically altered and new beginnings are possible.

Secularisation radically changed the way in which people saw the world, in other words, the security of their worldview which had remained largely un-

changed for centuries, was threatened in the nineteenth century. Apocalyptic literature supplied new meanings and interpretations in times of crisis, but in a secular world, religious visions of the apocalypse do not have the salvic potential of the same visions in a religious world. The new social situation generated a new symbolic vocabulary for ancient apocalyptic themes; religious symbols had to be re-interpreted for a secular world, and a new version of the apocalyptic genre, which fitted more closely to the real world as experienced by modern humanity was needed. Science fiction appeared as a imaginative literary genre of mythic, apocalyptic dimensions, to address this situation. In a similar way to religious apocalyptic, science fiction inverts the dimensions of time and space and the classification of groups, all central to any given worldview and through this, provides the energy needed to withstand the crisis of secularisation, urbanisation and industrialisation. In addition to this essential and central apocalyptic characteristic, others, such as apocalyptic cleansing power, visions of perfect societies of the future, and creation of

survivor myths, all lend themselves to the genre we call apocalyptic. As discussed in Chapter I, it is a collection of characteristics, rather than a strict set of rules which allows a work or a set of works to be called apocalyptic. Under these circumstances and conditions, science fiction functions extremely well as apocalyptic literature, and the only difference between science fiction and religious apocalyptic literature, is its starting point: science fiction starts from secular premises, relevant to the secular crises of the modern world. Science fiction is a quasi-religious mythos within the modern, secular worldview. But, at some point the distinctiion between religious and secular breaks down. Secular apocalyptic may represent an imaginative engagement with ultimate concerns of human existence that are essentially religious.

The future tense of apocalyptic, whether it appears in expressly religious contexts, or in the secular, imaginative, literary genre of science fiction, is a tension between an anticipated re-ordering of the

the universe in the future, and social conflicts in the present. Apocalyptic strategies embody that future tense through a proleptic fulfillment of a future promise in present imagination. That imaginative re-ordering of space, time and classification is at the heart of science fiction as secular apocalyptic literature.

FOOTNOTES TO CHAPTER V

1. Halperin, D; "Gnosticism in High Tech: Science Fiction and Cult Formation", in Halperin, D, (ed), Psychodynamic Perspectives on Religion, Sect and Cult, Boston, John Wright, 1983, pp 257-266.

2. See Clarke, I F; Ibid, pp 117-196.

3. See Davies, S; Living through the Industrial Revolution, London, Routledge and Kegan, 1966.

4. Douglas, M; Purity and Danger, An Anlaysis of the Concepts of Pollution and Taboo, London, ARK Paperbacks, 1984, pg 35.

5. Goodwin, B, and Taylor, K; Ibid, pg 9.

6. See Fussel, P; Ibid, pp 123-124.

BIBLIOGRAPHY

1. Abish, W; In the Future Perfect, London, Faber and Faber, 1984.

2. Amis, K; New Maps of Hell: A Survey of Science Fiction, London, Gollancz, 1961.

3. Anticipation: Christian Social Thought in Future Perspective, Nos 10-28, Geneva, World Council of Churches, 1972-1980

4. Arendt, H; The Human Condition, Chicago, University of Chicago Press, 1958.

5. Aron, R, (ed); World Technology and Human Destiny Ann Arbor, Michigan University Press, 1963.

6. Asimov, I; Asimov on Science Fiction, London, Panther, 1984.

7. Asimov, I; Foundation, London, Panther, 1979.

8. Barbour, I; Technology, Environment and Human Values, New York, Praeger, 1980.

9. Barr, D; "The Apocalypse as a Symbolic Transformation of the World: A Literary Analysis", in Interpretation Vol 10, 1985.

10. Benns, F and Seldon, M; 1939 to the Present, New York, Appleton-Century-Crofts, 1965.

11. Bernal, J; The Social Function of Science, London, Routledge, 1939.

12. Birnbaum, N; The Crisis of Industrial Society, London, Oxford University Press, 1970.

13. Borel, E; Space and Time, London, Blackie, 1931.

14. Butor, M; "The Crisis in the Growth of Science Fiction", in R Howard (ed) Inventory, London, Jonathan Cape, 1970.

15. Capra, F; The Tao of Physics: An Exploration of the Parallels between Modern Physics and Eastern

Mysticism, London, Wildwood House, 1975.

16. Cawler, D, (ed); Approaches to Science Fiction, Boston, Houghton Mifflin, 1978.

17. Chase, S; The Most Probable World, New York, Harper and Row, 1968.

18. Chernus, I; "Mythologies of Nuclear War", in Journal of the American Academy of Religion, Vol L, no 2, June 1982.

19. Clarke, I F; The Pattern of Expectation: 1644-2001, London, Jonathan Cape, 1979.

20. Clarke, J; Profiles of the Future: An Enquiry into the Limits of the Possible, London, Gollancz, 1962.

21. Cohn, N; The Pursuit of the Millenium, New York, Harper and Row, 1957.

22. Collins, J; The Apocalyptic Imagination: An Introduction to the Jewish Matrix of Christianity, New York, Crossroad, 1983.

23. Conklin, G, (ed); The Best of Science Fiction, New York, Crown Publishers, 1946.

24. Crick, B; George Orwell, A Life, London, Secker and Warburg, 1980.

25. Croall, S, and Sempler, K; Nuclear Power for Beginners, London, Writers and Readers Publishing Co-operative Society, 1978.

26. Davies, P; Space and Time in the Modern Universe, Cambridge, Cambridge University Press, 1977.

27. Davies, S; Living Through the Industrial Revolution, London, Routledge and Kegan, 1966.

28. DelRey, L; The World of Science Fiction, 1926-1976: The History of a Sub-Culture, New York, Garland, 1980.

29. Dickson, L; H G Wells: His Turbulent Life and Times, Harmondsworth, Pelican, 1972.

30. Douglas, M; Purity and Danger: An Analysis of the Concepts of Pollution and Taboo, London, ARK Paperbacks, 1984.

31. Eliade, M; The Sacred and the Profane: The Nature of Religion, translated William R Trask, New York, Harcourt, Brace and World Inc, 1959.

32. Eliade, M; The Two and the One, translated J Cohen, Chicago, Chicago University Press, 1965.

33. Eliade, M; A History of Religious Ideas, Vol I, translated W R Trask, Chicago, Chicago University Press, 1978.

34. Evans, D; The Great War, 1914-1918, London, Edward Arnold, 1971.

35. Faunce, W; Problems of an Industrial Society, New York, McGraw Hill, 1968.

36. Frye, N; Anatomy of Criticism, 4 Essays, Princeton, New Jersey, Princeton University Press, 1957.

37. Fussell, P; The Great War and Modern Memory, New York and London, Oxford University Press, 1975.

38. Gager, J; Kingdom and Community: The Social World of Early Christianity, Englewood Cliffs, New Jersey, Prentice-Hall Inc, 1975.

39. Goodwin, B, and Taylor, K; The Politics of Utopia: A Study in Theory and Practice, London, Hutchison and Co, 1982.

40. Gregorios, P Mar; Science for Sane Societies, Madras, The Christian Literature Society, 1980.

41. Halperin, D; (ed); Psychodynamic Perspectives on Religion, Sect and Cult, Boston, John Wright, 1983.

42. Hanson, P; The Dawn of Apocalyptic, Philadelphia, Fortress Press, 1975.

43. Hayes, G; World War I: A Compact History, Folkstone, Bailey Bros and Swinfen, 1973.

44. Herbert, F; Dune, London, New English Library, 1968.

45. Hobsbawm, E; Industry and Empire, Harmondsworth, Pelican, 1969.

46. Huxley, A; Brave New World, Harmondsworth, Penguin, 1974.

47. Huxley, A; Brave New World Revisited, Harmondsworth, Penguin, 1965.

48. Huxley, J; Science and Social Needs, New York and London, Harper, 1935.

49. Kermode, F; The Sense of an Ending: Studies in the Theory of Fiction,New York, Oxford University Press, 1967.

49. Ketterer, D; New Worlds for Old: The Apocalyptic Imagination, Science Fiction, and American Literature, Bloomington, Indiana University Press, 1974.

50. Koch, K; The Rediscovery of the Apocalyptic, London, SCM Press, 1972.

51. Kreuziger, F; Apocalypse and Science Fiction: A Dialectic of Religious and Secular Soteriologies, Chico, Scholars Press, 1982.

52. Langsam, W; The World Since 1914, 6th edition, New York, MacMillan, 1952.

53. Lessing, D; Memoirs of a Survivor, London, Picador, 1974.

54. Lilen, H; Introduction á la Micro-informatique du Microprocesseur au Micro-ordinateur, Nancy, Berger-Levrault, 1977.

55. Marty, M; "Irony (fig) and (lit) in Modern American Religion", Journal of the American Academy of Religion, Vol LIII, no 2, June 1985.

56. Massyngberde Ford, J; Revelation: Introduction Translation and Commentary, Garden City, Doubleday and Co, 1975.

57. Nef, J; Cultural Foundations of Industrial Civilizations, Hamden Conn, Archon Books, 1974.

58. Orwell, G, Nineteen Eighty Four, Harmondsworth, Penguin, 1984.

59. Redfield, R; "The Primitive Worldview", Proceedings of the American Philosophical Society, no 94, 1952.

60. Redfield, R; Human Nature and the Study of Society: The Papers of Robert Redfield, Vol I, Chicago, University of Chicago Press, 1963.

61. Redfield, R;"Ethnic Relations: Primitive and Civilized", in Jitsuichi, Masuoka, and Preston Valen (eds), Race Relations: Problems and Theory, Chapel Hill, University

of North Carolina Press, 1961.

62. Rifkin,J, and Howard, T; Entropy: A New Worldview, New York, Bantam, 1981.

63. Robertson, R, (ed); Sociology of Religion, Harmondsworth, Penguin, 1969.

64. Rose, M; Alien Encounters: Anatomy of Science Fiction, Cambridge, Mass, Harvard University Press, 1981.

65. Roszak, T; The Making of a Counter Culture, Reflections on the Technocratic Society and its Youthful Opposition, Garden City, Doubleday and Co, 1969.

66. Russell, D; Apocalyptic, Ancient and Modern, London, SCM Press, 1978.

67. Simon, U; The Trial of Man, Oxford, Mowbray and Co, 1973.

68. Smith, J; Map is not Territory, Studies in the History of Religion, Leiden, E J Brill, 1978.

69. Spicer, E; Human Problems in Technological Change, A Casebook, New York, Russel Sage Foundation, 1952.

70. Swinburne, R; Space and Time, 2nd edition, London, MacMillan, 1981.

71. Talmon, Y; "Millenarism", in David Sills (ed), International Encylopedia of the Social Sciences, Vol 10, London, MacMillan, 1968.

72. Talmon, Y; "The Pursuit of the Millenium: The Relation between Relgious and Social Change", in W Lessa and E Vogt (eds), Reader in Comparative Religion: An Anthropological Approach, 2nd edition, New York, Harper and Row, 1966.

73. Thomson, D; Europe Since Napoleon, Harmondsworth, Pelican, 1966.

74. Tillich, P; A History of Christian Tought from its Judaic and Hellenistic Origins to Existenialism, New York, Simon and Shuster, 1967.

75. Traverson, E; Immigration: A Study in American Values, Boston, D C Heath and Co, 1964.

76. Verne, J; Journey to the Centre of the Earth, London, J M Dent and Sons, 1970.

77. Wells, H G; The First Men in the Moon, 9th edition, London, William Heinemann, 1983.

78. Wells, H G; The Time Machine, 9th edition, London, William Heinemann, 1983.

79. Wells, H G; The War of the Worlds, 9th edition, London, William Heinemann, 1983.

80. Worsley, P; The Trumpet Shall Sound: A Study of Cargo Cults in Melanesia, London, 1957.