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An Apostate Instauration:

Religion, Moral Vision and Humanism in Modern Science Fiction.

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John J. Casey.

Department of English Studies.

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ABSTRACT

Since the characteristic logicality of most science fiction can overshadow its debt to Romantic, or more properly, Gothic literature, the humanistic 'science fiction of aspiration' is a rather neglected element of the genre. This study offers evidence of a distinctive, often quite fundamental current of Gothic feeling which runs through some early science fiction; and traces the changing presentation of scientific materialism and the first strains of anticlericalism in later texts. As religious writers also have used the themes and conventions of science fiction astutely in attacking 'profane' science and 'secular' morality, especially in the context of the scientific or materialistic 'utopia', their stories are of considerable interest and are also discussed in detail.

A reader by turns reminded of human sinfulness and then again confronted with the imputed inadequacies which the Romantic humanist seeks to transcend may well wonder why religion and science clash so recurrently in science fiction. The provenances, contexts and discourse of the moral perspectives which are commonly encountered in this popular genre are identified and discussed. These are particulary significant in the light of the apostate quality of humanistic texts, and their teleological concerns. Several influential critiques of institutionalised religion and clerical hypocrisy are examined fully; they reveal how the central device of the _factitious religion_ developed from its generic beginnings in Butler's first satire, _Erewhon_, and emerged as a distinctive feature of science fiction.

From the outset, the utilization of Faustian, Promethean and Messianic protagonists in this 'science fiction of aspiration' is scrutinised. Other intertextual features, whether conceptual, structural or thematic, are also elucidated. The study concludes with an examination of the most hubristic, sublime and teleological of the many themes of contemporary science fiction: the self-transcendence of man, the ultimate fulfilment of humanistic aspiration.

CONTENTS

INTRODUCTION

The present work reports the findings of an extended study of the themes, images and devices used by a very diverse group of writers whose work discussed here reflects an attitude to religious belief, and an interest - however superficial or dismissive - in contemporary ethics. Their chosen medium is science fiction, a genre whose very nature ordains that its conventions are far from being hard and fast, and which encompasses some of the most prosaic, the most *outré*, and the most inventive fiction of recent times.

Attempts to describe science fiction definitively have long been a favourite critical pastime; collectively, however, these have only served to suggest how protean the field actually is, for science (or, as Robert Heinlein preferred, speculative) fiction hallmarks and conventions are continually being reworked by the genre's avant-garde. Generally speaking, though, science fiction can be regarded as a particular kind of radical fiction because it deals with what has been aptly called 'the forward edge of the present'; that is, the nature and potential impact of change.

Though critics have often disputed the essential nature of social change and its provenance, the central point is rarely disputed: science, or if you will, speculative fiction deals with momentous or general change as no other popular medium does. Moreover, some science fiction, though clearly conservative in values and perspective, is at the same time radical in the earlier sense. The change treated may be pernicious, malign or demonic, but it is happening, may happen or will happen. Other stories promote a more encouraging picture of human development. As will become evident, a fundamental argument about human fallibility and human perfectibility

is at the heart of this debate. The controversy seems perennial; it has continued through changes of theme and context, from the commitment to rationalism seen in early works, through the religious response to potentially lethal science and the anti-religious satires presented as factitious religions, emerging in recent post-modern depictions of human apotheosis. Indeed the fiction discussed in the following chapters reflects this marked disaffection with traditional perspectives, most notably religious attitudes, established in the past and hence rejected by minds whose attention is turned to the future.

Classic studies of the genre have tended to stress the man/machine relationship, the utopian and anti-utopian generic tradition, or have sought to formulate ontological definitions which discriminate between science fiction and science fantasy. Despite the religiose title of his pioneering survey, J.O.Bailey did not identify or collate a group of religious science fiction texts in Pilgrims Through Space and Time: Trends and Patterns in Scientific and Utopian Fiction(1947), in the same way as he was able to discuss 'The Gothic Romance' or 'The Wonderful Journey'. In the late 1950's and early sixties, however, it was recognised that a group of distinctly religious texts was emerging, much as James Blish (writing as William Atheling) had anticipated in 1953:

> Science fiction has already dealt at some length with the problems of interplanetary man's allegiance to a home country, to a home government, to the family he left behind, and even to the home sexual code. Lately there have been several science-fictional inquiries into his relationship with the home god...
>
> This is of particular interest to the practising writer or critic, be he theist or mechanistic materialist himself, because it represents an enormous potential extension of the subject matter of science fiction in the direction of real human problems - which is the direction in which the medium must be extended if it is to remain viable.
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James Gunn followed Blish (whose criticism written under the pen-name of William Atheling was later published as The Issue at Hand and More Issues at Hand), in grouping together (in The Road to Science Fiction) some of the more notable of the works discussed in the following chapters, and Brian Aldiss indicated the religious or moral nature of some texts in Billion Year Spree(1973) and Trillion Year Spree(1986) offering, in the later edition co-written with David Wingrove, a memorable, epigrammatic definition of science fiction as 'Hubris clobbered by nemesis.'(2) Anthologies and collections such as Other Worlds, Other Gods (edited by Mayo Mohs) have found their way into libraries as hard-bound editions rather than as successful paperbacks. A degree of more sustained critical interest has also attended religious science fiction, and surveys of the field have been published, notably Harold L.Berger's study of chiliastic and dystopian themes, Science Fiction and the New Dark Age; and, most recently, The Transcendent Adventure: Studies of Religion in Science Fiction/Fantasy edited by Robert Reilly. Cogent, perceptive criticism has also lately provided semiotic and structuralist perspectives (by Darko Suvin, and Robert Scholes, respectively).

Science fiction with a religious setting or theosophical theme has quite a respectable pedigree in terms of the genre as a whole. Not much of it turns out to be very respectful towards orthodox or conventional religious belief, however. There are stories and novels which plainly are imbued with religious conviction, accepting Mankind's subordinate role in a created universe: however critical, unorthodox or visionary, these are, like the four novels named in the next paragraph, essentially devout fabulations and speculations. Then again there is sceptical writing which ranges from constructive

satire to hostile iconoclasm. The four titles below (by Mary Shelley, Philip K.Dick, and Samuel Butler) demonstrate the difficulty in assigning closely-defined values to these terms, for all are also sceptical to the extent that they are unorthodox. The question, being in many cases effectively a matter of degree, leads into the difficult area of authorial purpose, and demands close reading(3). (Fortunately authors often make their sympathies quite evident.)

The empirical approach adopted here aims to identify and explicate the contentions and ideologies of 'the science fiction of aspiration' by employing an original conceptual framework which supports the systematic exploration of the fiction, and which permits any views held in common by these many authors to be established. Their works have been organized to reflect the dominant ideology - religious faith, rationalism, transcendentalism - which they reflect, and to reveal their mutual influences and thematic resonances however overshadowed these may seem to be by the philosophical affiliations or religious persuasions of their authors.

Granted, the canon of texts discussed is not exhaustive, and while there are a number of texts, particularly short stories, which were not included, well-known examples illustrating every aspect of the science fiction of aspiration have been. The texts adduced in this study (many of them recognised to be amongst the finest of the genre) may be seen as forming a group within the genre as a whole. Each work discussed in the following chapters is like the others in two significant ways. In the first place, they all can be said to be science fiction (as opposed to science fantasy, horror, or escapist literature) because they all present scenarios which would be meaningless without their central scientific element, and offer a

narrative which remains faithful to the author's initial premises and is internally self-consistent, generally, from start to finish. Secondly, they deal with a chiliastic or teleological question, and consequently the term 'science fiction of aspiration' fittingly conveys their thematic concerns with destiny and the ultimate point or purpose of existence.

The appeal of this variety of science fiction has had a far greater durability than stories which dealt with such seven-day wonders as the lie detector, or other contemporary anxieties like the greenhouse effect. So even though the promethean theme, for example, is central to what was arguably the first modern science fiction (Mary Shelley's Frankenstein of 1818) one could easily find several recent novels in which this theme predominates, Philip K.Dick's Do Androids Dream of Electric Sheep?, for example. Furthermore, the unique significance of Samuel Butler's utopian satires, Erewhon(1872; 1901) and Erewhon Revisited(1901), can be discerned if they are seen as precursors of some of the most common forms of the science fiction of aspiration.

In his study of the genre, New Worlds for Old(4), David Ketterer proposed that science fiction is characteristically a 'literature of apocalypse'; and novels like Cat's Cradle, The Time Machine, Deus Irae and A Canticle for Leibowitz do afford plentiful evidence of the apocalyptic strand of modern science fiction. Yet, as Brian Aldiss's potted definition ('hubris clobbered by nemesis') implies, science fiction can also be seen, in similar terms to Mr. Ketterer's, as a 'literature of aspiration'. This study aims to elucidate the development and present standing of that complementary strand of the imagination in an important popular genre.

Since aspiration to divine power, humanistic rebelliousness and a concern with some moral issue are typical features, many of these stories possess distinctive storylines. Prometheus, Faust and the Messiah turn up in many guises in this 'instauration' of humanistic science fiction. Just as often (especially in stories of the late 1940's and 1950's such as C.S.Lewis's Out of the Silent Planet and James Blish's A Case of Conscience) the story has a manifestly religious setting or theme. A prominent concern with specific aspects of religion, morality and humanism is a feature of all of the work discussed. The preferred term is 'apostate' rather than 'heretical', however, for the idea of apostasy subsumes that of heresy and extends to the secular rebellion and radicalism of Nineteen Eighty-Four and Player Piano.

In his first novel, Jean-Paul Sartre listed fifteen humanistic persuasions(5), all of which probably are represented among the ranks of science fiction writers. The science fiction of aspiration is the generic form which is pre-eminently theirs; and the changing and diffuse nature of humanistic opinions, and their ethical imperatives, are of primary interest here. One cannot hope to be quite categorical faced with the sheer variety of argument and illustration advanced by so many authors, and the empirical approach ordains that these best be examined in their literary contexts rather than in the abstract. Yet a quite distinct form of idealistic humanism is often encountered in this group of diverse stories and novels. Essentially it is John Passmore's 'scientific humanist ideal...a world without myths, in which men will see for themselves, without feeling the need for any mythical justification, that to be at once rational, free and loving is the only life proper to man.'(6) With the decisive addition

of aspiration (which admittedly does not sit well with the implicit contentment of Passmore's secular culture), we have the well-spring of the late 'instauration' or revitalization of a radical genre less and less attracted by technological solutions or mechanistic thinking, but as concerned as ever with humane ethics and human destiny(7).

Crucially, aspiration (cognate in this context with disaffection with the present order) is in religious terms ipso facto apostate. For according to Christian epistemology - once the conventional metaphysical system of Western science fiction - the present order is Providential, i.e., the result of God's active interest in human affairs, and, notwithstanding the doctrine of free will, is subject always to Divine Will. To aspire, then, is to reject the Christian Revelation in favour of another code of behaviour, and to abandon the established religious sensibility in pursuit of a degree of ethical autonomy. One may therefore speak of the 'hubris' of humanism.

Ketterer acknowledges that 'most science fiction is optimistic'; but the science fiction of aspiration goes beyond scientific positivism or even a simple faith in progress in its humanistic implications. This literature is generally progressive, invoking constructive visions of the world as it is (or could be made) either by attempting "mimetic" description utilising rational extrapolation, or by pitching critical inferences in a dialectic with the prevailing social order. Very often these texts have a distinctive moral dimension; indeed, some are devout tracts, while others serve as a sort of authorial soapbox from which the writer harangues us with his insights into our frailties, vices or disappointingly unheroic lassitude. Their ideology and rhetoric are both individualistic - even solipsistic - and eclectic. Accordingly, both relevant critical

discussion and influential non-fiction such as Aldous Huxley's essay on Literature and Science, Sartre's Existentialism and Humanism, and C.P.Snow's controversial view of The Two Cultures are drawn upon where appropriate. Quite often, too, one encounters familiar ideas (the so-called 'shaggy God' stories culled from Christian Scripture, though other sources abound) which have been re-cast in a 'space-age' contextualisation. For instance, 'God is dead,' asserted Nietzsche; Philip K.Dick was able to be much more specific:

> 'God is dead,' Nick said. 'They found his carcass in 2109. Floating out in space near Alpha.'
> 'They found the remains of an organism advanced several thousand times over what we are,' Charley said. 'And it evidently could create habitable worlds and populate them with living organisms, derived from itself. But that doesn't prove it was God.'
> 'I think it was God.'
> Our Friends from Frolix 8 (1970); p.50.

Of course, uncertainty or indeed despair about the nature of God is by no means a twentieth-century phenomenon, however secular the present may seem. When Nietzsche, the supreme advocate of self-assertion, was but ten years old, Gerard de Nerval paraphrased an even earlier source(8) to produce the impassioned declaration: 'God is dead! Heaven is empty - Weep, children, you no longer have a father.' The idea of God as a benevolent father bespeaks the fundamental link between morality and religion.

The most potent moral tenets have a religious provenance, for they are sanctioned (the very word has religious connotations) by God Himself, the Creator of mankind. Yet in the Garden of Eden there was but one law - 'Though shalt not eat of the fruit of the Tree of Knowledge.' Prelapsarian humans were, we are told, innocently ignorant of good and evil. The inference (of which much more will be said later) to be drawn could be that it is knowledge which sets apart Creator

and created. Yet even in their state of amoral simplicity man and woman desired to be greater than they were, for they were readily tempted, and the archetypal innocent primitives duly became Fallen Men(9).

What is remarkable about much of the fiction examined in this thesis is suggested by the quotation from Dick, which reflects a readiness to speculate about God, and godhood. Voltaire suggested that if God did not exist, then we should have to invent him. Not deterred by its latent anthropocentrism, this is a contention many science fiction writers have treated in their modern Faustian and Promethean allegories for two reasons. It raises the question of the validity of the enormous influence religions of all kinds possess, and regularly exercise in resolving moral issues conservatively. More significantly, this apostate principle suggests that godhood is somehow within the scope of human endeavour.

Such is the diversity of the science fiction of aspiration that many ideologies and faiths are represented, sympathetically or otherwise. However, four philosophies dominate the field: Christian ethics, scientific rationalism, atheistic materialism, and holistic gnosticism. Each has its own traditions and distinctive orientation of three particular tenets - the nature of the universe (cosmogony) and its beginnings (cosmogeny); the role, and the purpose, of human existence (teleology); and the final state of the changing universe (eschatology).

Equally important is the characteristic epistemology, or theory of knowledge, central to, or implicit in the tenets of these several philosophical systems; and their essential ontology, or axiomatic

ideas of human nature.

Traditional Christian ideas about the nature of man and his knowledge of both the sublunary world and the angelic realms are conveyed - metaphorically or (even) literally - by the story of Adam and Eve and their Fall from Grace in Eden. Some knowledge is divine and therefore proscribed; and human nature is inherently imperfect. Accordingly, in speaking of the epistemology inherent in Christianity we must include three varieties of knowledge - mundane or pragmatic knowledge about the physical world; mystical or prophetic lore about the transcendent spiritual realm; and Revelation itself, the Word of God brought by the Redeemer of mankind who restored Fallen Man's birthright, and re-established in the world the teleological possibility of Salvation for mankind.

By contrast, scientific rationalism began and has remained emphatically materialistic, and by its very nature has long rejected the inference that there is knowledge about man and the universe which is too dangerous to be understood or utilised. Science, then, has since Classical times been seen as the means whereby man might be afforded increasing control of his environment and destiny. Also, the discoveries and theories of scientists have been taken, commonly, as being inimical to key elements of religious beliefs, giving rise to the ideas of atheistic materialism and other 'heresies' against the '<u>philosophia perennia</u>'. Yet the increasing sophistication of science has paradoxically afforded late, apocalyptic evidence of the idea of human fallibility - thus, one may infer, of the imperfectness of human nature - while confirming that rationalism possesses its own limitations. Since the 1930's, science fiction has reflected the contemporary power of applied science (and the prevailing popular

view of science which it itself partly created) in its conventional presentation of science as being either millenial or deadly, the epitome of a Promethean endeavour.

Latterly the Enlightenment confidence of scientific materialism has been eroded by degrees into contemporary prudence or caution by the prescient awareness of the deficiencies of scientific methodology, a mood which echoes the tenor of Kant's critique of empiricism(10). Ironically, while many Christians have retained their absolute faith in revealed knowledge (i.e., god-given knowledge), scientists have become increasingly aware of the inadequacies of the mechanistic approach which led their predecessors to suppose that anything might be possible for promethean man. The ancient Greeks, for instance, were aware of the dangers of assuming that rationalism held or could provide all the answers even in that most logical of disciplines, mathematics; but these same followers of Pythagoras who knew that his famous theorem is true for all cases except 1,1 and the (irrational) square root of 2 quietly suppressed the unpropitious fact. Heisenberg, author of the celebrated and fundamental 'Uncertainty Principle,' and after him, Einstein, whose theories of Relativity embody a persistent paradox, have re-introduced into science a spirit of enquiry which is much more conjectural and wary of its own premises, and prepared to be sceptical about its own findings.

For some writers this era of scientific scepticism is only the very threshold of the Age of Science rather than its culmination. Certainly Christian and other religious perspectives have developed over a similarly protracted time-scale; and new ideas such as Teilhard de Chardin's 'noosphere' - the spiritual totality of his theological theory of evolution - emerge as unorthodox but devout

reinterpretations of Christian teleology. Naturally all this is fertile ground for the genre's more original talents, for this same scientific scepticism supports thoroughly unscientific speculations, perhaps the least positively fantastic of which is gnostic holism.

Like science itself, gnosticism promises man power. However, the central premise of this school of thought is sceptical: if the scientific code has after all only an expedient or pragmatic objective relationship with the world as it actually is, then it may in fact be occluding our perception of the real world which scientific data approximately describe. Gnostic holism is the most intuitive and chimerical of the epistemologies which are encountered in science fiction, though fittingly it generally subsists in the more tenebrous locales of science fantasy wherein the implausible donnée may be projected with a less precise sort of extrapolation. Perhaps the purest modern avatar of Gothicism, it has annexed the macrocosm as its sublime demesne. Generally, its expressions are arcane rather than explicative, but where gnostic fabulation emerges in books like Fritz Leiber's Gather, Darkness, the Dune series and Ian Watson's The Embedding, for instance, it is buttressed by 'ultralogic' and 'ur-' or 'meta-language'. These approach Poe's 'arabesque reality' - 'a visionary realm outside of time and space' (11). Poe's gnostic stories invoke pseudo-science, arcana and apocrypha in creating a fearful scenario, but some modern successors in science fiction have employed similar materials to portray humane growth. Rather than Poe's microcosms - disruptive or morbid intrusions of multiplex reality into the familiar or quotidian - science fiction's hubrists, from Victor Frankenstein to the Atreides dynasty, strive to break through to the macrocosm in order to learn and develop.

Still, whatever its actual limitations, the pace of scientific change and innovation increases all the time, bringing mankind new challenges and vistas:

> '...the technological and behavioral powers born of the new sciences convey the sense of control over the creational process. The idea emerges of man's purposes; of his actively shaping himself, his society, and his history. Instead of enquiring into God's creation of nature and man in the past, attention turns to man's self-creation in the future.'
> 12

The kind of progressive impulse described above J.Norman King is more and more coming to replace positivism in the promethean metaphor of science fiction. The idea of (self-) transcendence is essential to aspirational science fiction, which has evolved its own special representations, none more specific than the transformational alien synergies with which contemporary science fiction abounds as lusus naturae like 'Odd' John Wainwright once did. No materialist writer seems happy with the idea that human nature has reached a pitch of perfection that cannot be surpassed, and so aspiration, the progressive impulse central to this fiction is sustained. Indeed, some see man as having the potential to become (with or without the apocalyptic help of aliens) his own god.

Apocalypse and aspiration are complementary facets of science fiction and are found together in many of the novels discussed in this thesis, such as in Childhood's End, for instance, or in Dune, as indeed they are linked in the Gothic precursors of modern science fiction like Frankenstein and the sublime stories of Edgar Allan Poe. It is, however, hard to find a better instance of their association than in the novels of Philip K. Dick, of which Angus M.Taylor has written:

> This (perfect) other world is Dick's ideal, organized, humanly-constructed realm of the spirit - of God, not transcendent, external, or above the world, but immanent - the full expression of the human potential. It is on this level that that Dick the political-scientist/sociologist merges with Dick the religious prophet, for if we recognize in his work the concept of immanent divinity, then the religious and political dimensions need not conflict. When humanity is God the politics is religion. The struggle for ideal social relations is the struggle of mankind towards its Godhood.
> 13

This heretical idea is the supreme humanist vision, bespeaking the ultimate vindication of the humanist tradition at the expense of orthodox religious beliefs. This teleology generally rejects Christian eschatology, in which the world (i.e., the Cosmos inhabited by man) is finally destroyed by God at the end of time after the Second Coming; and Christian soteriology - the promise of salvation and eternal reward extended to the individual. Yet two forms of materialist eschatology are not reducible in the same way, these being Spengler's theory of the ineluctable cyclical collapse of civilization; and the physical principle of cosmic entropy, in the 'heat-death' of the Universe. Even in the most inspired materialistic visions of human destiny, deterministic, cosmic factors like these remain to blight the outlook for Mankind.

Taylor's reading of Dick's moral vision introduces the idea of the immanent divinity of human nature - man can become a god in his own image. Humane theodicy, a highly speculative teleology, is the logical and intuitive culmination of humanistic aspiration. From Classical times it has stood for the most blasphemous, yet also the most inspiring, of humanist projections of man's creative potential and his immanent divinity. Symbolized for centuries by the Promethean myth, it has been transmitted to the present with only small concessions to Christian ethics. We may consider briefly two historic representations.

Marlowe's Faustus cannot sustain his acquired superhuman abilities because they are not innate; when his contract expires, they fail and the Devil claims him. His Icarian humanism thus prompted his seduction and self-betrayal.

Victor Frankenstein, the 'Modern Prometheus', tries to engineer an improvement on human nature, thereby fulfilling his aspiration to rule and to create in his own (idealized) image, but his hopes collapse when his viable if outwardly repellent creature rejects _him_ in revenge for his earlier inability to cope with the consequences of his profane meddling with nature. In both these parables of scientific hubris, self-transcendence (the radical transformation of self and hence, personal situation) proves illusory and transitory.

The traditional argument of the devout writer is that the moral code, being God-given, is immutable and absolute; yet this perspective is rejected by a significant body of opinion who argue that morals reflect their social context, and vary in important ways in different cultures. Moral relativists like Wells, Huxley and Skinner point out ways in which morality is diversified or qualified by circumstances even _within_ a society. For some sceptical humanists, ideas of vice and virtue are the products of social consensus, and form an ethical superstructure reflecting the humane capacity to distinguish right from wrong. Indeed, conventional moral restraint is regularly rejected by science fiction's hubrists (often, as in _Tiger! Tiger!_ and _Barefoot in the Head_, at the cost of their sanity.)

To the devout, the ideal of worldly human perfectibility is not merely heretical, it is the very height of human vanity. It is also the essence of the humanistic science fiction of aspiration. Faustus the mage, a man of power and knowledge, aspires to godhood for if God exists at all, it may be possible to become like Him.

Contrast this with the tragic logic of the Jansenists, who lived in certain despair of ever seeing the 'hidden' God of their doctrine, but remained very devout if unorthodox Christians. For all that, as one might have expected, the speculative scepticism of much of the science fiction written about religion is usually humanistic, for in this 'Age of Scepticism', committed humanists invest their faith in Man, not a putative God.

If in this literature faith may be said to be one side of the coin, the other surely is reason. In the same way as faith has always been associated with devout aspiration, reason has been the corrolary of humanistic aspiration; and in science fiction, reason has until the middle decades of the present century been cognate with the rigorously logical methods and thinking of the laboratory scientist or the engineer. Yet the characteristically optimistic mood of scientific positivism has also been challenged, for scepticism can be as readily applied as a means of critical evaluation to science as it has been used to confound or refute any other doctrine (Vonnegut's Cat's Cradle is a prime example). Consequently, both religious and materialistic science fiction can possess a polemical note one might not have expected to meet with such regularity in a pre-eminently imaginative type of fabulation.

Scientific rationalism may itself not deny the existence of God, Christian or otherwise; atheistic materialism, one of its main cultural expressions, does. A purely humanistic philosophical frame, materialism focuses on man's existential situation and dismisses the notion of a spiritual or supernatural dimension to life. Providence, Redemption and Salvation are effectively mythical notions, for even if Man is not perfect, mankind is not culpable for having betrayed God's trust. The disingenuous blasphemy of John Lennon, for

instance, who claimed that the Beatles were 'more popular than Jesus Christ', suggests the eager iconoclasm of the Sixties and Seventies reflected in Moorcock's Behold the Man.

Materialists, then, being sceptical about the past, deal existentially with the present, but with mankind as the single focus of their confidence, they are impelled to take a positive line about the future. On the face of it, to do otherwise would be to accept the discouraging possibility of ineluctable or external constraints upon Man's ethical and racial development (pace ecologists) which must weaken or contradict the epic idea of inexhaustible human potential central to materialistic humanism. In fact such simplistic positivism is rarely encountered in science fiction of aspiration except as an object of satire by religious humanists like Blish, Lewis and Miller. Their work represents another philosophical hybrid in which conventional religious ethics are imbued with a radical vision of spiritual development which, despite having unorthodox ontological and teleological values, retains the reverence for God and its hope in the Christian Salvation of the philosophia perennia. It may be seen as the science fiction of spiritual aspiration, in which the humanistic idealism which gives epic force to fiction is modified by Christian ethics and hopes.

The humanistic emphasis of some science fiction is attracting a great deal of attention because of its conceptual complexity and depth. Its contemporary popularity reflects its capacity to offer refurbished parables and paradigms of attractive values and humane achievement. However, since science fiction also possesses a catastrophic variant, it is equally good at offering reinvigorated paradigms of despair, and the two strains go hand-in-hand in many texts. We may, for the sake of argument, consider how three apposite

deterministic influences affect the progressivism central to the science fiction of aspiration.

One of the most radical assertions of man's dominion over nature and rejections of Christian perspectives was issued by the German writer Neitzsche. As his perspectives were atheist, he refused to accept that man was a creature limited by design by a Creator. Rather, he saw man as capable of further evolution, and of becoming 'superman'. To achieve this virtual apotheosis, traditional ethics and moral values would have to be ignored by the transcendent individual. Yet far from being regarded as the pinnacle of emancipation, the amoral Ubermensch culture is generally seen as the epitome of inhumanity, for in its megalomaniacal, self-obsessive ruthlessness, it permits the individual only two possible roles, supremacist or slave. Consequently, Neitzsche's ideas - undeniably epic but corrupted by their violent brand of evolutionary principle - are rarely advanced with any enthusiasm by humanists.

Marxian determinism is considered by some to represent the opposite extreme in terms of its limitations upon individual aspirations. Again, the case has been made by apologists that communism is inherently humanistic in its denial of God and the realm of the spirit, and in its insistence upon collective development; but critics of this socialist teleology object to its central principle that a class or collectivity, as opposed to an individual, establishes the scope of development. Heroism may be an appropriate aspiration, but divinity is absolutely precluded.

However, the ideas of Neitzsche and of Utopian socialism are alike in their promotion of the humanistic ideal that man is capable of self-transcendence; in the latter case, in serving the collective will or, conversely, in ruthlessly pursuing the individual will to

the point of apotheosis, the ultimate fulfillment of the Neitzschean hero. Yet, reflecting its materialistic principles, communist ideology is scientific where Neitzsche's vitalist ideals are essentially solipsistic.

What undoubtedly provided the impetus for both these emphatically different humanistic ideologies is the real nemesis of man the scientist - entropy, the ineluctable terminal state of physical existence and matter. For all that this is a scientific principle, inferred from countless experimental tests and the most basic assumption of all other scientific processes, its very universality is the most chilling answer to religiose soteriological hope, for it deterministically predicts the evolution of absolute inertia and annihilation. Frank Herbert, author of Dune, ascribes these perceptions to his messianic hero Paul Atreides, known to his fanatical Fremen acolytes as 'Muad'Dib':

> There is in all things a pattern that is part of our universe. It has symmetry, elegance and grace - those qualities you find always in that which the true artist captures. You can find it in the turning of the seasons, in the way sand trails along a ridge, in the branch clusters of the creosote bush or the pattern of its leaves. We try to copy these patterns in our lives and our society, seeking the rhythms, the dances, the forms that comfort. Yet, it is possible to see peril in the finding of ultimate perfection. It is clear that the ultimate pattern contains its own fixity. In such perfection, all things move towards death.
> from 'The Collected Sayings of Muad'Dib' by the Princess Irulan; Dune, Bk.III, p.361

In its final end-state, the Universe is to fulfil its ultimate tendency, replacing the complex organisation of organic, sentient life with its own mindless form of frozen, primitive ordering. Indeed, it is this very bleak teleological prospect which generally stimulates both complementary strands of the science fictional imagination. (On the other hand, by using a similarly direct kind of logic, the devout may find an answer to the astrophysicist's godless

void in St.Anselm's axiom: 'Since God is divine, he encompasses all possibilities, including the possibility of existence.') Whatever its provenance, its humanistic idealism is one of the most enduring strengths of a genre whose authors continually confront the deadly idea of human annihilation with a prospect of transcendence and fulfilment.

REFERENCES and FOOTNOTES

1. ATHELING, William (James BLISH), 'Cathedrals in Space;' reprinted in The Issue at Hand, Advent Publishers, Chicago, 1973; p.50.

2. Aldiss's tongue-in-cheek 'definition' refers as much to the quite variable critical reception of science fiction, and the genre's rather humble reputation, as much as to the genre itself. He goes on to characterise ordinary literature as 'hubris clobbered by mimesis.' For all that, his choice of terms is not without significance. His actual definition of science fiction in Trillion Year Spree (amended from that of Billion Year Spree only by the substitution of 'mankind' for 'man,' and of 'mode' for 'mould') is:

   > Science fiction is the search for a definition of mankind which will stand in our advanced but confused state of knowledge (science), and is characteristically cast in the Gothic or post-Gothic mode.

3. Adam J.FRISCH and Joseph MARTOS have argued, in their paper 'Religious Imagination and Imagined Religion' (The Transcendent Adventure, ed. Robert Reilly, pp.11-26), that 'what science fiction writers dismiss as unworthy of imitation or belief is not usually religion but its parody - religiosity. Occasionally they even reject religiosity in the name of genuinely religious fundamentalizing, ultimatizing, and moralizing.'(p.13) While the distinction between earnest, devout satire of orthodox religion of the kind written by Samuel Butler and, more recently, Keith Roberts; and sceptical iconoclasm may not always be utterly clear, Messrs. Frisch and Martos certainly go too far in concluding that:

   > The visions of some authors and some stories are obviously religious (even when they often appear to be antireligious); the visions of many other authors and stories are more subtly religious (even when they do not specifically mention religion). They are concerned in some way with basic being, meaning, and goodness, and since these are essentially religious concerns we can say that science fiction of this sort is essentially religious. Op.cit., p.25

   What is manifestly obvious in some of the works discussed in the following chapters, especially Chapter Six, ('The Factitious Religions of Science Fiction'), is that concerns such as 'basic being, meaning, and goodness' are just as important to those secular writers who satirize religious beliefs and sentiments in good earnest, and who look upon these same qualities as humane qualities first and foremost, and religious qualities only by dogmatic annexation. In other words, some sort of moral propriety, observance, or decency is innate and antedates the Koran, the Ten Commandments, and any other orthodox codex of moral tenets, which directly counters their assumption that all or any morality is de facto religious.

Another remarkable proposition they lead in their discussion of varieties of religious science fiction is that Walter M.Miller's excellent A Canticle for Leibowitz is in fact a parody of institutionalized religion, a contention which is, to say the least, marvellously wide of the mark. The Order of Blessed Liebowitz may indeed possess what are, even by today's standards, unique oddities because its canon was distorted by the legacy of the holocaust from which it emerged as the guardian of faith and learning, but the reader is never in any doubt that the Order is indeed the repository of a moral authority which clearly transcends such circumstantial distortions. (See also Chapter Four, below.)

4. KETTERER, David, New Worlds for Old: The Apocalyptic Imagination, Science Fiction, and American Literature; Indiana Univ. Press, London, 1974.

5. Antoine Roquentin, the diarist of Sartre's Nausea (1938), regales the reader with the following catalogue (which has been abridged by leaving out most of 'Roquentin's' bitter sarcasm):

> The radical humanist is a special friend of civil servants. The so-called 'Left-wing' humanist's chief concern is to preserve human values; he belongs to no party because he doesn't want to betray humanity as a whole, but his sympathies go towards the humble; it is to the humble that he devotes his fine classical culture... The Communist writer has been loving men ever since the second Five-Year Plan; he punishes because he loves...The Catholic humanist, the late-comer, the Benjamin, speaks of men with a wonder-struck air. What a beautiful fairy-tale, he says, is the humblest life, that of a London docker, of a girl in a shoe factory! He has chosen the humanism of the angels; he writes, for the edification of the angels, long, sad, beautiful novels, which frequently win the Prix Femina.
>
> Those are the principal types. But there are others, a swarm of others: the humanist philosopher who bends over his brothers like an elder brother who is conscious of his responsibilities; the humanist who loves men as they are, the one who loves them as they ought to be, the one who wants to save them with their consent, and the one who will save them in spite of themselves, the one who wants to create myths, and the one who is satisfied with the old myths, the one who loves man for his death, the one who loves man for his life, the happy humanist who always knows what to say to make people laugh, the gloomy humanist whom you usually meet at wakes. They all hate one another: as individuals, of course, not as men.
>
> From the 1965 Penguin Edition, pp.168-169;
> translated by Robert Baldick.

6. PASSMORE, John, Science and its Critics; Duckworth & Co. Ltd., London, 1978; p.19. His further discussion, in which he confronts the propositions of Skinner, the advocate of behavioral psychology, is of interest in the light of the present discussion:

> The scientific humanist ideal, one might say, is a world without myths, in which men will see for themselves, without feeling the need for any mythical justification, that to be at once rational, free, and loving is the only life proper to man. It is a splendid ideal, one that I do not wish for a moment to deny. But when we look at other societies, we see clearly enough the way in which their moral policies are supported by myths - the myth of the proletariat, the myth of the classless society, for example. And we know that to the inhabitants of such societies, these doctrines are not myths - modern versions of ancient myths about the rule of saints in an earthly paradise - but manifest truths. Is humanist-democratic thinking dependent on similar myths, myths about responsibility, freedom, and creativity that the growth of science might destroy? Skinner clearly thinks so. I have taken the opposite view. I have argued that science can destroy myths about the degree of autonomy human beings possess without weakening our everyday concepts of freedom, responsibility, and dignity. But if I am wrong, then science could end by destroying the self-conception on which its very existence depends. And that I am wrong, many antiscientists would argue.
> (Ibid.)

7. Clearly Stanislaw LEM, author of Solaris, is seeking not so much a revitalization of science fiction but its transformation in the following keynote challenge to its conventions:

> We thus come to understand what SF has done to the cosmos, for it makes no sense at all to look at the universe from the point of view of ethics. Therefore, the universe of SF is not only miniscule, simplified and lukewarm, but it has also been turned towards its inhabitants, and in this way can be subjugated by them, losing thereby its indifference,. . . In the universe of SF there is not the slightest chance that genuine myths and theologies might arise, for the thing itself is a bastard of myths gone to the dogs. The SF of today is a "graveyard of gravity," in which that subgenre that promised the cosmos to mankind, dreams away its defeats in onanistic delusions and chimeras - onanistic because they are anthropocentric.
> Science Fiction Studies 4 (1977)

Lem's are serious contentions; some science fiction does seem merely derivative or unexciting conceptually, and of a genre which enjoys a reputation for imagination and originality, such charges are simply damning. His pessimism extends to the intellectual range of a genre which focuses inwards on man at the expense of 'genuine myths and theologies' which would not subsist on ethical concerns. Significantly Lem's main criticism expresses his impatience with science fiction which sustains the genre's humanistic tradition, which he rejects as anthropocentric and self-serving. The science fiction of aspiration treated in this study disappoints when viewed from this rigorous perspective, as, for all its apostasy, its central concerns are with the teleology (and thereby) the ontology of man. But it does not follow that it is thereby as conservative in nature as he seems to argue.

Lem also takes issue with the way science fiction authors have domesticated the universe itself with comforting ethics. Yet, as is argued elsewhere in this study, the characteristic hubris of the science fiction of aspiration and the maverick rebelliousness of its protagonist, is the quality which imbues its 'myths gone to the dogs', its Promethean, Faustian and Messianic storylines, with their vigour and lasting appeal. Moreover, the 'humane' ethics Lem scorns usually function in this kind of science fiction as an aspect of a confrontation with conservative values. Advanced as improvements or correctives to the values of the times, they therefore testify to an author's progressive intent and prevent the dismissal of his arguments as simply unprincipled. If they seem relativistic or anthropocentric by comparison with the absolutist morality they challenge, it is because their respective authors in fact recognize the cosmic indifference of which Lem speaks, as is borne out by the existentialist perspective some stories reveal. Their ethics are 'humane' (i.e., 'local' and sometimes so localized as to be simply the egotistical responses of the hubrist) not 'cosmic;' but the vision and experience they portray are macrocosmic.

8. Jean-Paul, Blumen- Frucht- und Dornstucke, 1796.

9. Intriguingly, even in Christian lore, the Old Testament Jews did not receive sacrosanct laws until Moses' time (though then these were straight from the hands of God).

10. Passmore, op.cit., discusses three common criticisms of the scientific method and the scope of its principles:

> What can such critics have in mind? What, if not what science does by creating and testing theories, would count as "telling us why?" If scientific explanations were really satisfactory, if they really told us why, then - so it has often been replied - first, they would refer us to reasons so fundamental that we should at once see why everything must be as it is; secondly, these fundamental reasons would take the form of purposes; thirdly, they would explain everything, leaving no room whatsoever for chance or coincidence. All that science does, in contrast, is to tell us that one thing happens as a result of something else happening; it draws attention to a mechanism, not a purpose; it sets aside much that happens as, by the nature of the case, not admitting of explanation. So it leaves us, if we are in search of genuine explanations, as dissatisfied as ever.
>
> p.4

11. See Ketterer, op.cit., Chapter 3.III; as well as Chap. 3 below.

12. KING, J.Norman, 'Theology, Science Fiction, and Man's Future Orientation;' in Many Futures, Many Worlds ed. by Thomas D. Clareson, Kent State University Press, 1977; pp.237-259.

13. Angus M. TAYLOR, 'Critics Dream of Electric Dick;' Foundation 10 (June 1976); p.125

CHAPTER ONE:

Four Auspices

Lately modern science fiction has attracted a good deal of critical attention, at least partly because the assumption is abroad that it has "caught up" with the mainstream of contemporary literature or otherwise "matured":

> As a noncanonical, subliterary genre, science fiction has inevitably tended to lag behind canonized or mainstream literature in its adoption of new literary modes. ....Dating from the "new wave," however, the pace of change in science fiction has accelerated, so that already by the late 1960's and early 1970's we can begin to discern...an increased openness to developments in post-modernist writing - in other words, a tendency towards the "post-modernization" of science fiction.
>
> Brian McHale,
> Postmodernist Fiction(1)

The general re-evaluation of science fiction has been prompted to some extent by the familiarity of a new generation of structuralist and "poetic" critics who dismiss the damning prejudices with which even the more impressive works of the 1950's and 1960's were often met. However, it has coincided with a new readiness of some authors to experiment more freely and ambitiously with science-fictional language, motifs and ideas, and use them with a greater awareness of what limitations generic conventions may possess. Above all, though, some contemporary science fiction writers have succeeded in adapting the materials traditionally associated with the genre to create new parables of human endeavour and enterprize in the bewildering and disturbing post-modernist climate of scepticism, anxiety, confusion and personal insecurity. Writing in the early 1970's, Brian Aldiss noted that, 'Science fiction, like most branches of art today, is more aware than ever before of its own nature'; and went on to characterise

the 'basic impulse' of science fiction as being 'as much evolutionary as technological.'(2) The basic question this begs, however, must be teleological. If the interaction of these two modern wisdoms, technology and development, does offer mankind increasing control over the rate and direction of further social and personal evolution (man 'actively shaping himself, his society and his history' as King(3) puts it), this basic teleological question - 'What is the ultimate point or purpose of existence?' - is undoubtedly germane, and not simply because many celebrated authors of science fiction have explored it in their fiction.

Terms used in analysing and discussing the science fiction of aspiration may be unfamiliar; many of them are illustrated in the following discussion of two short stories (by Arthur C.Clarke, and Harry Harrison) which often have been selected for general anthologies of science fiction, a "novella", or short novel, by James Blish, and a recent short story by Brian Aldiss. These 'auspices' collectively convey an overview of the broad range of religious and humanist concerns encountered in this literature.

'Surface Tension' by James Blish(1957) deals with humane aspiration in an vivid and ingenious way, and is one of the longer sections of a novel, The Seedling Stars(4), the whole consisting of four such 'books' about genetic engineering and the adaptation of human life to existence on other worlds. In a carefully crafted story consisting of a prologue and two 'cycles' each several chapters long, Blish tells of the beginnings of human life on an alien world called Hydrot.

The story opens with a prologue in which the crew of a crashed exploration ship consider their bleak future. The theme of aspiration is introduced at the outset as a crew member reflects grimly on their

hopeless situation and the mission which had brought them there:

> 'If I were a religious man," the pilot said suddenly, I'd call this a plain case of divine vengeance.'
> ..'It's as if we'd been struck down for--is it hubris? Pride, arrogance?'
> 'Hybris,' Chatvieux said, looking up at last. Well, is it? I don't feel swollen with pride at the moment. Do you?'
> '...I was thinking about why we came here in the first place. It takes a lot of arrogance to think that you can scatter men, or things very much like men, all over the face of the galaxy. It takes even more pride to do the job - to pack up all the equipment and move from planet to planet and actually make men, make them suitable for every place you touch.'
> 'Surface Tension,' Prologue; p.108

The usurpation of divine creativity, the conscious meddling with the natural order in trying to take control of and direct human evolution, is, of course, a sort of Frankensteinian hubris. However, as Chatvieux points out to the anxious pilot, '...we don't make men. We adapt them' - pantropy does not aim to better created Man, merely to alter the basic human physique to allow survival in most exobiological environments, including, in this case, two-foot puddles. Thus, even if some of the necessary restructurings are fairly drastic - webbed feet, six-week breeding cycle, sporulate hibernation, and arachnid book-lungs, all to microscopic scale - the resultant creatures will be 'people' and 'men'. The scientists then determinedly talk out any possibility of divine usurpation:

> Chatvieux nodded. 'All right, let's get started. While the pantropes are being calibrated, the rest of us can put our heads together on leaving a record for these people. We'll micro-engrave the record on a set of corrosion-proof metal leaves, of a size our colonists can handle conveniently. We can tell them, very simply, what happened, and plant a few suggestions that there's more to the universe than what they find in their puddles. Some day they may puzzle it out.'
> 'Question,' Eunice Wagner said. 'Are we going to tell them they're microscopic? I'm opposed to it. It may saddle their entire early history with a gods-and-demons mythology that they'd be better off without.'

> 'Yes, we are,' Chatvieux said, and la Ventura could tell by the change in the tone of his voice that he was speeaking now as their senior on the expedition. 'These people will be of the race of men, Eunice. We want them to win their way back into the community of men. They are not toys, to be protected from the truth forever in a fresh-water womb.
>
> 'Surface Tension,' Prologue; p.114

Though the adapted men could have been given important advantages in establishing themselves on Hydrot, Chatvieux ordains that their identity - and hence, sensibility - are to be forged through struggling to master their environment and overcoming the predators which could end their bid for survival. While evidently a celebration of human intelligence, fortitude and adaptibility, this is also an adventure story which depicts both human aspiration and vulnerability in the macrocosm. The physical environment of the world where the tiny adapted men struggle for freedom, and the other obstacles which they have to overcome to claim and exercise their ancestral legacy, is exploited by the doomed scientists to ensure that the colonists will not become complacent or decadent.

This drive to contend against restrictions upon development and freedom, the ennobling struggle to change the human universe for the better, is actually a form of positivistic humanism; and none of the crew question the propriety of the idea. It is an implicit assumption of the story that humaneness - one's "humanity" - is the product of a righteous struggle to fulfill one's destiny or aspirations. Other humane qualities which are celebrated in this story are intelligence and organisation, below; and, later, initiative and the scientific method. For these impressive faculties, men are respected by the most intelligent of the indigent life-forms whose habitat they now share, the protozoans:

'Why do we need Shar?' the other Para said.

'For his brains, Para. He is a thinker.'

'But his thoughts are water. Since he has taught the Protos man's language, he has forgotten to think of the Eaters. He thinks forever of the mystery of how man came here. It is a mystery - even the Eaters are not like man. But understanding it will not help us to live.'

Lavon turned blindly toward the creature. 'Para, tell me something. Why do the Protos side with us? With man, I mean? Why do you need us? The Eaters fear you.'

There was a short silence. When the Para spoke again, the vibrations of its voice were more blurred than before, more even, more devoid of any understandable feeling.

'We live in this world,' the Para said. 'We are of it. We rule it. We came to that state long before the coming of men, in long warfare with the Eaters. But we think as the Eaters do, we do not plan, we share our knowledge and we exist. Men plan; men lead; men are different from each other; men want to remake the world. And they hate the Eaters, as we do. We will help.'

'And give up your rule?'

'And give it up, if the rule of men is better. That is reason...'

'Surface Tension', Cycle One; p.120

Blish's story also provides an excellent illustration of the crucial role given in the science fiction of aspiration to the acquisition of knowledge both as a characteristic motive of human behaviour, and as a uniquely humane achievement: 'if the new universe of which Shar had spoken existed at all, it had to exist beyond the sky, where the light was. Why could not the sky be passed, after all?' Motivated by his curiosity about the stars mentioned on the history plates, this intrepid, Icarian hero, Lavon, ascends to contest the natural barrier:

'Lavon! Where are you going? Lavon!'

He leaned out and looked down. The man with the adze, a doll-like figure, was beckoning to him from a patch of blue-green retreating over a violet abyss. Dizzily he looked away, clinging to the bole; he had never been so high before. He had, of course, nothing to fear from falling, but the fear was in his heritage. Then he began to climb again.

After a while, he touched the sky with one hand. He stopped to breathe. Curious bacteria gathered about the base of his thumb where blood from a small cut was fogging away, scattered at his gesture, and wriggled mindlessly back toward the dull red lure.

He waited until he no longer felt winded, and resumed climbing. The sky pressed down against the top of his head, against the back of his neck, against his shoulders. It seemed to give slightly, with a tough, frictionless elasticity. The water here was intensely bright, and quite colourless. He climbed another step, driving his shoulders against that enormous weight.

It was fruitless. He might as well have tried to penetrate a cliff.

Again he had to rest. While he panted, he made a curious discovery. All around the bole of the water plant, the steel surface of the sky curved upward, making a kind of sheath. He found that he could insert his hand into it - there was almost enough space to admit his head as well. Clinging closely to the bole, he looked up the inside of the sheath, probing it with his injured hand. The glare was blinding.

There was a kind of soundless explosion. His whole wrist was suddenly encircled in an intense, impersonal grip, as if it were being cut in two. In blind astonishment, he lunged upward.

The ring of pain travelled smoothly down his upflung arm as he rose, was suddenly around his shoulders and chest. Another lunge and his knees were being squeezed in the circular vice. Another...

Something was horribly wrong. He clung to the bole and tried to gasp, but there was - nothing to breathe.

The water came streaming out of his body, from his mouth, his nostrils, the spiracles in his sides, spurting in tangible jets. An intense and fiery itching crawled over the surface of his body. At each spasm, long knives ran into him, and from a great distance he heard more water being expelled from his book-lungs in an obscene, frothy sputtering. Inside his head, a patch of fire began to eat away at the floor of his nasal cavity.

Lavon was drowning.

With a final convulsion, he kicked himself away from the splintery bole, and fell. A hard impact shook him; and then the water, who had clung to him so tightly when he had first attempted to leave her, took him back with cold violence.

'Surface Tension,' Cycle Two; p.151

'In blind astonishment, he lunged upward' - Lavon's is almost a paradigm of the post-modernist hubrist's sensibility. Blish's adventurer lunges towards the unknown, rather than recoiling fearfully from it, for only by vanquishing his own timorousness can the seeker after knowledge secure it. Lavon is L'Allegro to Shar's Il Penseroso, continuing the Prologue's attributions of wisdom to Chatvieux the scientist and

daring to la Ventura the pilot, respectively. However, for this, the sixteenth generation of the adapted men, Lavon's audacious trip through the meniscus has twofold special significance, for it confirms that the hints of a greater world of men beyond the stars gleaned from the history plates are not mere misinterpretations; and, equally important, that there is something beyond their 'sky'.

Consequently, the adapted men design and then construct from the wooden materials to hand a vehicle which will take them through the surface tension which restricts them to their pool. After making a successful breakthrough, they pass through the 'roof' of their microcosm and traverse the intervening landscape in their water-filled 'space-ship'. The sun sets, and a breathtaking prospect takes its place in the heavens:

> 'Now then,' Shar said thoughtfully, 'I would guess that there's water over there in the canyon, if we can reach it. I'll go below again and arrange...'
>
> Lavon gasped.
>
> 'What's the matter?'
>
> Silently, Lavon pointed, his heart pounding.
>
> The entire dome of indigo above them was spangled with tiny, incredibly brilliant lights. There were hundreds of them, and more and more were becoming visible as the darkness deepened. And far away, over the ultimate edge of the rocks, was a dim red globe, crescented with ghostly silver. Near the zenith was another such body, much smaller, and silvered all over...
>
> Under the two moons of Hydrot, and under the eternal stars, the two-inch wooden spaceship and its microscopic cargo toiled down the slope toward the drying little rivulet.
>
> 'Surface Tension,' Cycle Two; p.175

Blish concludes with a flourish. Another surprise awaits the adventurers: the girls next door. The colonists have haploid, not diploid, genes and reproduction is asexual; thus, all the people in Lavon's pool are male. The discovery they make in the neighbouring pool, that there are two genders, is probably only the least significant element

of this resolution of the story. More importantly, the humans have finally won over the independent-minded but cooperative Protos to their cause, and so the lost history plates are returned. The clinching proof was the demonstration that knowledge is as important as Shar and his predecessors had always insisted, for as the dying Proto acknowledges, 'There is nothing that knowledge cannot do':

> The Para stirred feebly. The girl watched it with wide eyes. The sound of the Para using human speech seemed to impress her more than the ship itself, or anything else that it contained.
>
> 'The Eaters can be conquered,' the thin, burring voice said. 'The Protos will help,' as they helped in the world from which we came. The Protos fought this flight through space, and deprived Man of his records; but Man made the trip without the records. The Protos will never oppose Man again. We have already spoken to the Protos of this world, and have told them that what Man can dream, Man can do. Whether the Protos will it or not.
>
> 'Shar - your metal record is with you. It was hidden in the ship. My brothers will lead you to it.
>
> 'This organism dies now. It dies in confidence of knowledge, as an intelligent creature dies. Man has taught us this. There is nothing. That knowledge. Cannot do. With it...men...have crossed...have crossed space...'
>
> 'Surface Tension,' Cycle Two; p.180

Even if Blish could not resist mildly sending up this encounter with the opposite sex - looking at the girl, Lavon's gaze meets her eyes and he feels 'an unaccountable warmth' (and he fails to catch the significance of Shar's question, 'But - have we?') - the teleological question remains, as Shar realizes, unanswered. Their aspiration had brought them a rite of passage, from which they have emerged with their human identity confirmed and their ancestors' ontological problem effectively resolved. These are not decadent creatures, but men, possessing imagination, initiative, intelligence, technological and scientific awareness, creativity, and determination. However, they are also ignorant of their real origins (though they now have

their history plates again), and of one other vital faculty with which they were endowed and which Blish quietly allowed to slip out of the story's focal plane: they will one day be air-breathers again, and comprehend that space, as their progenitors knew it and beyond which lies their real birthright as part of the community of humankind to which they belong, is the real challenge which they must ultimately confront.

One strategy quite frequently used by partisan authors is to seek to discredit a religious creed by excoriating its doctrinal morality and vision; or less ambitiously, simply by depicting a particular sort of religious folly or paradox. In the next example, evangelical zeal and blind faith are exposed to satirical scorn.

'An Alien Agony' by Harry Harrison (1962; 5) is a transposition of Christ's death into a prelapsarian alien world in which the innocence of the native beings is at stake. The role of the serpent as corrupter is ironically filled by a missionary priest, whose zeal to bring the Weskers into the congregation of his faith brings him into direct confrontation with a sceptical trader, John Garth, who insists the priest leave them as they are. Father Mark is a humble, most devout and utterly sincere figure who resorts to self-assertion reluctantly, and only when his mission demands it:

> 'You're not wanted here and have no permission to land. You're a liability and there is no one on Wesker to take care of you. Get back into the ship.'
>
> 'I don't know who you are sir, or why you are lying to me,' the priest said. He was still calm but the smile was gone. 'But I have studied galactic law and the history of this planet very well. ...I have as much right to be here as you do.'
>
> 'An Alien Agony,' p.323

Garth is profoundly hostile to the priest because, knowing Wesker and its people well, he fears for their independence. He sees the Weskers

themselves as a rational, guileless and guiltless people completely at ease in their world. Their only slightly irritating trait is an apparently insatiable curiosity. Itin and the other Weskers take turns to act as their group's 'Knowledge Collector.' The Weskers have no religion, and Garth resents Father Mark's intention to introduce one to them, not just because he is an atheist and cannot see any point in religion, but because he believes that the logical Weskers, faced with its paradoxes and mysteries, will only become confused. However, unable to dissuade the priest, Garth leaves him to his evangelism.

The Weskers, with their characteristic obsession with knowledge, are a ready audience for Father Mark's biblical sermons but they find incongruities in the priest's discussions of the Scriptures. The paradoxes of the sacred mysteries which can only be resolved by an act of faith puzzle the aliens, and they consequently seek the views of Garth on the subject, asking him to confront Father Mark with his sceptical arguments so that they may decide for themselves by evaluating the debate:

> 'Will you come to the church? he asked. 'Many of the things that we study are difficult to learn, but none as difficult as this. We need your help because we must hear you and Father Mark talk together. This is because he says one thing is true and you say another is true and both cannot be true at the same time. We must find out what is true.'
>
> 'I'll come, of course,' Garth said, trying to hide the sudden feeling of elation.
>
> 'An Alien Agony,' p.331

Garth is elated by Itin's request for it suggests that they might still be disabused of the priest's teachings - 'There could still be grounds for hope that they might yet be free.' The idea of freedom for the Weskers, in Garth's eyes from the nonsense of religion, and in Father Mark's, from their native ignorance of Revelation and Providence, is central.

Garth's role in the discussion which ensues in the church is to advocate his atheistic materialism as the alternative to Christianity. The first question raised by the Weskers concerns the Creation: if, as Father Mark asserts, the Creator always existed even before his act of creation, might not the universe also always have existed? Father Mark replies that belief and contingent salvation are matters of faith - they are thus to be believed without the necessity of proof. Unconvinced, Itin turns to Garth, who advocates 'the scientific method which can examine all things - including itself - and give you answers that can prove the truth or falsity of any statement.'

To Garth's horror, Itin resolves to put the matter of God's existence to a logical test. A miracle is required, he decides, and only one kind will do:

> 'Now all He need do is make a miracle and He will bring us all to Him - the wonder of an entire new world worshipping at His throne, as you have told us, Father Mark. And you have told us how important this thing is. We have discussed this and find that there is only one kind of miracle that is best for this kind of thing.'
>
> His boredom at the theological wrangling vanished from Garth in an instant. ... He could see the illustration in the bible where Itin held it open, and knew in advance what the picture was.
>
> 'An Alien Agony,' p.333

Incessantly curious about literal truth and already prepared to verify experimentally the priest's contentions about miracles, the aliens crucify him according to his account of Christ's redemptive sacrifice in a horrifyingly pragmatic test of the validity of his belief. In the aftermath, they perceive that their previous innocence has been replaced by a new knowledge of sin, guilt and repentance.

Garth had killed and injured several of the Weskers in struggling to prevent them taking Father Mark. When he revives he finds that Itin has returned to loosen his bonds so that he can escape, for some of

his fellows, taking their lead from Father Mark's bible, wish to put him to death in retribution for the deaths which occurred at his hands. Itin has another purpose, however. Confused and worried about what has happened, Itin wants Garth to reassure him that Father Mark will rise on the third day and that the expected miracle will occur. When Garth denies the possibility, Itin asks the now ineluctable questions:

> 'Then we will not be saved? We will not become pure?'
> 'You were pure,' Garth said, in a voice somewhere between a sob and a laugh. 'That's the horrible ugly dirty part of it. You were pure. Now you are...'
> 'Murderers,' Itin said, and the water ran down from his lowered head and streamed away into the darkness.
> 'An Alien Agony,' p.336

Religion, as well as being the cause of Father Mark's death and the deaths of several others, is also held to be the source of guilt and moral confusion. To Garth, the Weskers are now a fallen race, their character changed utterly by their encounter with Father Mark's Christianity. While before the priest's intrusion they were innocent, rational creatures they now are subject to guilt, violence and all the doubts of religion, but without faith in their religion to help them overcome these new problems.

Harrison's parable sets two mutually exclusive views of the world at odds with one another. The rational Weskers stretch the meaning of religious tenets to the point where they are found lacking literal credibility, and as a result, Itin approaches Garth's philosophical position as the story ends. If they have gained knowledge, they have also been degraded as free, rational creatures as a direct consequence of murdering the priest; and they have, in effect, committed their own version of Original Sin - which ironically casts the well-meaning but naive priest in the role of the Tempter.

Though hardly a triumph for the trader's scientific materialism, he has avoided sharing the fate of the priest, and his argument that it would have been better to allow the Weskers to come to their own conclusions about sin and redemption through their own undistorted experience seems to have been upheld. The story may seem contrived but it does vividly promote its author's view of the manifold weaknesses of both scientific and religious abstract thought.

J.B.S.Haldane once observed that, 'There is no great invention, from fire to flying, that has not been hailed as an insult to some god.' It seems that it remains as attractive as ever to depict religion as a reactionary social force; certainly, the authors of the profane factitious religions of modern science fiction (discussed in Chapter 5) would seem to think so. More generally, a golden, utopian version of technophilic humanism is set in opposition to religious conservatism in many works of the first half of the century. John Roberts caught this ideological confrontation well recently when he reflected that 'Progress relies on the power of reason rather than on the scrutiny of sacred texts.' (The Triumph of the West). However, in the generic fiction of the period from the Second World War until the mid-1960's it is not hard to find evidence of a growing uneasiness with the simplistic notion that machines which liberate mankind also ennoble us. The divine injunction against seeking potentially disastrous knowledge is to the fore in some of the science fiction of the time. Still, another common theme is that only Progress will bring us the challenges which will offer us more knowledge and hence, greater self-awareness and maturity. In Arthur C. Clarke's short story 'The Star'(1955;6), mankind exploits the future technology of space travel, and an unnerving revelation is thereby gained.

The crew of a scientific exploration vessel are investigating a supernova:

> We were flying into the centre of a cosmic bomb that had detonated millenia ago and whose incandescent fragments were still hurtling apart. The immense scale of the explosion, and the fact that the debris already covered a volume of space of many billions of miles across, robbed the scene of any visible movement. It would take decades before the unaided eye could detect any motion in these tortured wisps and eddies of gas, yet the sense of turbulent expansion was overwhelming.
> 'The Star,' p.117

The narrator is a Jesuit scientist; the story is his rueful, tormented meditation over a deep crisis of faith: 'It is three thousand light-years to the Vatican. Once I believed that space could have no power over faith, just as I believed that the heavens declared the glory of God's handiwork. Now I have seen that handiwork, and my faith is sorely troubled.'(p.115) He is concerned also by the broader implications of their discovery - 'Will my report on the Phoenix Nebula end our thousand years of history? It will end, I fear, much more than that.'(p.116)

Forces of enormous magnitude were unleashed by the catastrophic detonation of the star, but almost at the centre of the chaos a lone, seared planet bearing an artificial pattern of radioactivity attracts the attention of the exploratory crew of scientists. The radioactive pattern which has brought them to the pathetic survivor of the planetary system which once revolved around the fatal star is in fact a beacon. They discover a vault buried deep beneath the planet's surface, which contains a terrible revelation:

> A civilization that was about to die had made its last bid for immortality.
> It will take us generations to examine all the treasures that were placed in the Vault. They had plenty of time to prepare, for their sun must have given its first warnings many years before the final detonation.

> Everything that they wished to preserve, all the fruits of their genius, they brought here to this distant world in the days before the end, hoping that some other race would find it and that they would not be utterly forgotten. Would we have done as well, or would we have been too lost in our own misery to give thought to a future we could never see or share?
>
> If only they had had a little more time! They could travel freely enough between the planets of their own sun, but they had not yet learned to cross the interstellar gulfs, and the nearest solar system was a hundred light-years away. Yet even had they possessed the secret of the Transfinite Drive, no more than a few millions could have been saved. Perhaps it was better thus.
>
> Even if they had not been so disturbingly human as their sculpture shows, we could not have helped admiring them and grieving for their fate.
>
> 'The Star,' p.118

Mourning the long-past agony of this admirable race, the priest inwardly questions a fundamental doctrine of his faith, the compassion of God: 'It is one thing for a race to fail and die, as nations and cultures have done on Earth. But to be destroyed so completely in the full flower of its achievement, leaving no survivors, how could that be reconciled with the mercy of God?'(p.119) Alone in his cabin 'three thousand light-years from the Vatican' with the symbols of his faith, the 'empty' crucifix and the engraving of the saints of his order, the Jesuit can still rise to this challenge. His scientific colleagues will, he believes, assert upon their return to Earth that the fate of this wonderful race proves that the divine justice of the Catholic God is merely notional; and that the explosion of the star which swept aside the aliens who were 'so disturbingly human' was a random cosmic event in an universe which is not subject to the shaping of a divine grand plan. The priest's response is unequivocal: 'Yet, of course, what we have seen proves nothing of the sort. Anyone who argues thus is being swayed by emotion, not logic. God has no need to justify His actions to man. He who built the universe can destroy it when He

chooses.'(p.119) His faith is easily equal to this test, but casuistry is not enough to defeat the crucial challenge which follows it.

Dating the cataclysm on astronomical and geological evidence, the priest has brought to light the cause of the genocidal disaster: 'There can be no reasonable doubt: the ancient mystery is solved at last. Yet, oh God, there were so many stars you could have used. What was the need to give these people to the fire, that the symbol of their passing might shine above Bethlehem?'(p.120) The story finishes with the priest's agonized question, a denouement which brings the religious context of the story sharply into focus. The explosion of the star was not a random event in a godless universe, but the deliberate action of a deity seemingly indifferent to the suffering of the race so destroyed.

The familiar assumptions about the relationship between God and Man, and about the nature of the Creator, are presented in this story as mere sentimentalism in the face of the frigid, dispassionate and entropic nature of the Universe at large. The priestly narrator recoils from the apocalyptic truth and his vocation, founded in his faith in the benevolence of God, is shaken to its roots by a bewildering discovery made possible only by science. If science illuminates, the truth it reveals is sometimes bitter. It is clear to the priest that there is after all a divine plan, but it is promulgated without mercy or compassion. Rather than the Christian God of love, mercy and justice, the fate of the people of 'The Star' bespeaks a God of supreme destructiveness, of wrath rather than redemption.

The sense of crisis and of growing uncertainty about ethics reflected in much late twentieth century literature has not been ignored by authors of science fiction. The century's two greatest

disillusionments, first with religious faith and then with scientific positivism, are now clearly visible in a good deal of science fiction, nowhere more apparent, perhaps, than in the work of Kurt Vonnegut, 'a post-modernist comedian of the absurd,' as Patrick Parrinder has described him. Reality - pre-eminently a reality defined in scientific terms - once thought to be immutable, essential and indisputable, is nowadays often depicted as a description merely of things as they seem, rather than the definitive view of the world as it is.

The post-modern vision of recent science fiction by writers like Vonnegut, Dick, Ballard, and Watson is by no means 'anti-scientism' though there is ample evidence (discussed in later chapters) of a radical shift in the traditional enthusiasm of science fiction writers for the mechanistic, closed universe model of early scientific theory. The challenging relativistic perspective of twentieth-century physics provided some of the impetus, to judge by the number of stories dealing with space/time anomalies. Indeed, the open commitment to rationalism and science so characteristic of most science fiction written before the 1960's has been displaced by a more guarded mood. Even the values of sceptical humanism become, in such sophisticated but disquieting portrayals of contemporary and anticipated life, as problematic as those of religion. Appropriately, the remaining short story of this initial survey exemplifies this new, more philosophical strain.

Three would-be missionaries of Theomanity land on the planet Bormidoor with the intention of establishing a church. 'Indifference' (Brian Aldiss, 1979;7), which offers an interesting contrast with Harrison's story discussed above, is the story of their struggle to complete the building and to survive until their task is completed

and the brain is installed in its shrine. The three are 'neuclones', and are at first all committed to their arduous project. However, by the end of the story only one has survived to departure by virtue of an increasily grudging but quite irreducible faith in Theomanity's grand design to fill the galaxies with the networks of consciousness which will represent their church when it is at last whole and functioning. Nupor, who has his own misgivings to overcome, takes on the additional task of trying to prosyletise one of the planet's sparse indigenous population:

> After prayers each night, before they slept, Nupor and Ovits educated Tom in theological history, hoping eventually to convert the lad to Theomanity.
>
> 'The difference between man and the animals preceding him is that man has a large brain. That brain told human beings that they had a purpose. What the purpose was had to be discovered. That's clear enough, isn't it?' Nupor said.
>
> 'I suppose so,' said Tom. He showed no interest, but apathy in most things was one of his notable talents.
>
> 'Two of the leading characteristics of the brain should have given humanity a clue as to the nature of the purpose. A profound religious sense marked his thought from the start. In all mankind's long history, rationalism and atheism have been aberrations.
>
> 'Mankind's earliest cave paintings show him making religion to assist the hunt. They also show him making weapons. That was the start of science. A profound scientific sense also marks mankind's thought - although it has often been at war with the religious promptings. Those two characteristics had to be at odds, or there would have been no deep questioning. Mankind was going through its difficult childhood phase. You understand?'
>
> 'Oh yes.'
>
> 'By the time of mankind's first limited flights into space, it was generally understood that hydrogen was the basic building block of the universe. The idea was disseminated that consciousness might be even more basic to the universe than hydrogen. It seemed a mystical idea at first, and we don't know who were its first advocates - the astronauts themselves, possibly. They had been given the chance to see further than other men.'
>
> 'Indifference,' pp.203-204

Fundamental to the creed of Theomanity is veneration of the brain as a most potent propagator of the immanent consciousness of the universe:

> The dual nature of the brain was a striking new fact. It was a receiver of information, and hence a scientific instrument; it was also a religious instrument. The brain acts as an extremely complex amplifier of the subatomic, for only at subatomic levels can the mechanisms of intelligence and consciousness take place. Above the subatomic lies the great deterministic universe, with no place for consciousness. Below the subatomic lies the all-embracing cosmic consciousness we perceive as God. Throughout the universe, only the human brain - and to a lesser extent animal brains - serves as a transmitter-receiver between the deterministic macrocosm and the all-pervasive world of God.
> 'Indifference,' p.204

This passage reflects the finely-balanced blend of science and transcendentalism which pervades the story, and more than a hint of Zen buddhist philosophy emerges from Aldiss's sophisticated depiction of God as an immanent consciousness. At the same time, the story's teleological theme is writ large, the ultimate purpose of man being to cherish and to serve the greater universal consciousness. This reasoning is explicated by Nupor in another soliloquy:

> This grandiose concept of the nature of the human brain, and hence of humanity and its role in the cosmos, was at first regarded with alarm. Many labelled it anthropocentric. But something happened which lent credence to the idea.
> As space flight developed, and mankind reached towards planets beyond his own stellar system, no other intelligent beings were found. Man was the unique interpreter of God to the universe.
> 'Indifference,' p.205

Of course, this last contention - 'Man was the unique interpreter of God to the universe' - might just as easily mean that man is merely promoting his own conjecture of God, perhaps even his own image of deified man - as the ultimate mind of the universe, as the sacred brain seems to confirm in answering one of Nupor's questions: 'The correct answer is neither that God has existed eternally, nor that he came into existence with the universe. God came into existence only when the human brain first began to interpret God into the physical

world. He is still coming into being.'(p.214) More ominous yet is the brain's final answer, which reveals its psychotic aspiration: 'Both God and universe are process. When God and universe are finished, process is complete. Everything vanishes in a puff of smoke. Metaphorically speaking. I could cite the math.'(p.215) The inference is that the toil of Nupor and countless others in 'labouring on his behalf' only propagates a thanatic, self-annihilating megalomania as the most highly-ordered form of intellect in the universe; a deadly form of theosophy indeed.

His two fellows having as it were fallen by the wayside, Nupor, the sole survivor, receives the brain's blessing and departs, only to find on his return to the home system that he is destined to spend the rest of his life in a sort of psycho-geriatric retreat on a barren planet. The cruel irony is that by the time he leaves Bormidoor, Meritorious Nupor has become quite disillusioned with Theomanity because of what he has been told by the brain.

In the Martian home, Nupor draws the inferences for himself, and comes to revile both the universe and the theocratic religion which sent him off to help consciousness perpetuate itself. His response to the universe he was taught to venerate as the domain of God has become heretical: he deplores it for its characteristic divine Indifference, and at the end of his meditation he urges the reader: 'Remember this. If there is a God, then we must become morally better than He.'(p.218)

With existentialism and phenomenology contributing to the contemporary precariousness of belief, the problem of creating and sustaining a humane but sceptical moral vision has become the stock-in-trade of writers like Philip K.Dick and Ian Watson. The Tower of Babel has replaced the forbidden fruit of the Tree of Knowledge as the fitter

symbol of humane aspiration to wrest an emancipating, dependable understanding of the cosmos from the inscrutable, omniscient creator who - if he exists - allegedly forbade it.

Many more authors have lately turned to transcendental portrayals of hubristic desire which display the visionary romanticism of the genre, Arthur C.Clarke's 2001:A Space Odyssey(1968) being a famous example. Homo Superior has a human gestation and endures frustration and bafflement. In the formative experience of metempsychosis he suddenly achieves divine perception after his individualistic struggle with a hostile and cryptic Cosmos, and thence attains divine power. Thus arrayed, this newly omniscient titan can protect and promote the best interests of his mortal fellows. The experience of metempsychosis (8), then, may be seen as functioning in this literature as a secular humanist parallel of theophany, religious revelation. While theophany does not confer divine power, it is the ultimate confirmation of the propriety of faith. Religious and humanistic science fiction abounds with theosophical referents like these, but in this latest type of science fiction about human aspiration as in all the earlier forms, knowledge - be it partial or portentous - is at the same time the driving force, and the prize coveted by science fiction's 'godling' protagonists.

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8. Clarke's novel is unusual in that its depiction of Bowman's transfiguration and rebirth as the Star Child is more or less in line with what theologians regard as metempsychosis, i.e., the reincarnation of the soul (or in materialistic terms, the identity) in this case, in a more evolved form. More frequently the idea is used loosely in presenting a sudden spiritual or intellectual transformation which leaves the protagonist inwardly transfigured by holistic self-transcendence, but to all outward purposes and appearances, the same person.

CHAPTER TWO

A Legacy of Aspiration and Satire

The single most important provenance of a major theme of modern science fiction dates from early last century, but it may also be discerned in still earlier sources. To understand how knowledge and aspiration have come to be so familiarly linked in the genre, one must begin by examining how it was that certain Gothic conventions first came to be associated with scientific and technological advancement in Mary Shelley's Frankenstein(1818). However one looks there in vain for the satirical spirit so evident in later science fiction which criticises orthodox religion. The factitious religions of Samuel Butler's Erewhon(1872) and its sequel discussed later in this chapter are early examples of a satirical device unique to science fiction.

In science fiction of the nineteenth and early twentieth centuries the excitement of achieving a scientific breakthrough is portrayed in a conventional way. It is often meant to be taken as the ultimate materialistic confirmation of a sort of rationalistic godhood, a quasi-divine prestige to which all educated (i.e., scientific, progressive) men can aspire. Swinburne caught the mood of this way of thinking particularly well when he proclaimed: 'Glory to Man in the highest! for Man is the master of all things.'(1) However, rejecting religious morality by blasphemously seeking knowledge and "meddling with nature" implicitly entails forsaking the most fundamental guarantee of stability in the sublunary world, divine infallibility made manifest both as the natural order and as sacred knowledge revealed to the faithful. Predictably, the change envisaged by the scientist or technologist excited by a discovery is commonly depicted as awesome,

ominous, or, reflecting science fiction's Gothic beginnings, repugnant.

For the story of the creation of mankind which is central to 'The Cunning of the Beast'(2), Nelson Bond seems to have relied heavily on Milton's interpretative version of The Book of Genesis, the epic Paradise Lost. There are obvious borrowings which all the scientific trappings of Bond's story cannot disguise, for example the case Bond's Adam puts to the Yawa to gain a mate(3), which is clearly derived from Paradise Lost, Book VIII, line 379 et seq.

Significantly, in Paradise Lost the fashioning of man is a divine act of pure creation; but in Bond's story it is attended by the laboratory horrors of vivisection, as his narrator's aghast response to one of the Yawa's less successful attempts reveals:

> I yet recall traversing a steaming room wherein was sunk a hydroponic tank whence emanated an oddly noisome scent. I cannot speak with surety of what this tank contained, but I do recall that as we passed, from its oily depths there flopped a strange, amorphous something which scrabbled with nailless paws at the walls of its prison and babbled piteous plaints in a voice of tongueless horror.
>
> 'The Cunning of the Beast,' p.25

The tone and language of Bond's story are often unmistakeably Gothic; and, as Michael Bishop's story 'The White Otters of Childhood' (1973) (4) suggests, Gothic revulsion and other intense sensations persist as important "special effects" in generic science fiction. The scientist Prendick is attempting a surgical metamorphosis of Serenos, a deposed tyrant:

> I began to believe that no such man as Fearing Serenos had ever lived in Windfall Last, for the creature on Prendick's operating table bore no resemblance to any human being I had ever encountered. Its moist grey flesh was marbled with intimations of blue, its face grinned with the livid sewn-up grin of a museum horror.
>
> 'The White Otters of Childhood ,' p.71

When in Bond's story we encounter the narrator's summary of the downfall of the Yawa Eloem the real source of its main theme is revealed as Mary Shelley's Frankenstein(1818)(5):

> Doctor Eleom is more to be pitied than scorned. His was the sad fate of one who, delving into secrets better left unlearned, succeeded only in creating a monster mightier than its maker...
>
> 'The Cunning of the Beast,' p.20

Yet these stories differ markedly in their central image of human nature. Bond's story is explicitly pro-humanistic 'by their very rebellion have these creatures proven the existence of their souls.' (p.41), whereas the morbid prognostication of Bishop's disturbed protagonist casts human nature as having 'an improper balance of stardust and dross':

> I am convinced that we are the freaks of the universe; we were never meant to be. In our natures there is an improper balance of stardust and dross, too much of one, too little of the other - but not enough of either to give us the perfection of the extreme.
>
> My entire life has been a struggle to achieve that which the universe long ago decreed we might not achieve. I have been living with the delusions of the evolutionary mistake of which I am a product. But no more. Tomorrow morning I am tacking about into the indifferent winds of the cosmos and altering my course. Though perfection is denied me in the direction of the westward seas, I will attain it by swinging towards the dawn. God! even now the salt is in my blood and the power of a shark's primordial lust surges through my heart and loins!
>
> I will swim against the current.
>
> I will seek out the channel that cuts beneath the Galleon of the Hesperides and beach myself among the flowers. There I will die, knowing that the white otters will observe my death and scamble into the sea - aghast at so much unprincipled might.
>
> And my death will be more honest than any single instance of a good man's piety.
>
> 'The White Otters of Childhood,' p.84

Mary Shelley's novel relates the circumstances and consequences of the creation of a grotesque "human" by the book's central figure, Victor Frankenstein, an obsessed experimenter whose perverse attempted

"benefaction" allows his authoress to portray him as a 'Modern Prometheus'. The overwhelming mood of the book is established by the dark fantasies (incest, vampirism, and hints of sadistic perversion) which can be discerned among other more obvious features. These prove it to be a late Gothic novel, somewhat influenced by M.G.Lewis's The Monk (1796). However, while the central protagonist of Frankenstein is assailed by illicit desires in the usual Gothic manner, Mary Shelley broke new ground by characterising him as a scientist, more or less in the modern sense. Moreover, three other scientists are given influential if modest roles. In deploying this scientific framework to such effect, Mary Shelley introduced an original strand to Romantic fiction for which her novel would be hailed as the forerunner of much of today's science fiction.

The figure of the scientific researcher was introduced to English letters by Francis Bacon(1561-1626) in the form of the 'fellows' of the House of Saloman in his speculative work The New Atlantis, left unfinished at his death. The aims of this institution (which the House 'father' expounds to guest visitors) clearly reflect the precepts of Bacon's Instauratio Magna, an unfinished, all-embracing compendium of contemporary knowledge: 'The end of our foundation is the knowledge of causes, and secret motions of things; and the enlarging of the bounds of human empire, to the effecting of all things possible.'(6) In other words, omniscience, omnipotence, and holistic mastery.

The Instauratio Magna was compiled from several of his earlier works which, together with some additional material, were intended to indicate not only what was known, but also where the gaps in human knowledge lay, so that these could attract investigation. This scholarly work was set down in Latin, but The New Atlantis, which drew on the

Instauratio Magna in its descriptions of the endeavours of the fellows, was published in English. Bacon bore something of a debt to Sir Thomas More's Utopia (ca.1516?) for The New Atlantis; continuing the sequence, the Academy of Lagado and its 'projectors' of Part III of Jonathan Swift's Gulliver's Travels (1726) are a satirical rendering of Bacon's House of Saloman, meant as an attack upon the Royal Society of the day.

These, then, were the scientific forerunners of Victor Frankenstein. However, there is more to his nature, as Walton records shortly after their first meeting:

> 'When younger,' said he, 'I believed myself destined for some great enterprize. My feelings are profound, but I possessed a coolness of judgement that fitted me for illustrious achievements. This sentiment of the worth of my nature supported me when others would have been oppressed, for I deemed it criminal to throw away in useless grief those talents that might be useful to my fellow creatures.
>
> 'When I reflected on the work I had completed, no less a one than the creation of a sensitive and rational animal, I could not rank myself with the herd of common projectors. But this thought now serves only to plunge me lower in the dust. All my speculations and hopes are as nothing, and like the archangel who aspired to omnipotence, I am chained in an eternal hell...'
>
> Frankenstein, chap.24 (p.484)

The archangel allusion may well be from Paradise Lost, which is a pervasive influence in Frankenstein. However thinly, Milton's epic tone found its way into Bond's short story, much as Frankenstein itself has similarly influenced the choices of many modern writers.

Mary Shelley's novel, which provoked some confusion among contemporary reviewers (7), has also had a rather mixed reception from critics in the second half of the present century. D.W.Harding decided in the 1950's that it was, 'one of those second-rate works, written under the influence of more distinguished minds, that sometimes display in conveniently simple form the preoccupations of a coterie.'(8) Without claiming too much for Mary Shelley's fairly

torrid tale, this seems glib, not to say harsh. More recently, the complex profusion of themes and ideas contained in the novel have prompted considered, less dismissive, evaluations(9) and, due in no small measure to the advocacy of Brian W. Aldiss (10), it has been recognized as 'the seminal work of the new literary genre of science fiction.'(11) Other historians of the genre, perhaps viewing the novel's Gothic milieu with disdain, have echoed Harding's disappointing literary snobbery; one simply called it 'an immature work which nevertheless has been enormously influential.'(12) Yet another reveals the shortcomings of too concise a resumé:

> Science, in this Gothic melodrama, stands accused of perverting the awesome power of natural forces to ungodly ends. Frankenstein's researches do irreparable damage to himself and his family, and his last words are a warning against the ambition of distinguishing oneself in science and discoveries.
>
> 13.

Given that Frankenstein's last words are actually:

> 'Farewell, Walton! Seek happiness in tranquility and avoid ambition, even if it be only the apparently innocent one of distinguishing yourself in science and discoveries. Yet why do I say this? I have myself been blasted in these hopes, yet another may succeed.'
> Frankenstein, chap.24 (p.491)

'Ungodly ends?' - judged by their outcome, certainly; yet, what else is his sacrilegious attempt to surpass divine creativity but essentially 'god-like' or 'godly'? A warning to others not to meddle or aspire? Hardly a wholehearted or convincing caveat, surely. Frankenstein's sensibility is a more complex one than we might have been led to expect.

Although critics usually have a surer touch with contemporary science fiction, a similar fate has befallen too much of that since there are those who seem to find it very difficult to assess the stature of a work in an even-handed manner once they have noticed that

its public and provenance are popular rather than "literary"(14). While some have, for one partisan reason or another, heaped praise upon fairly shallow science fiction, other writers have been underrated thanks largely to the exaggerated disdain with which their critics look upon generic fiction. It is of course pointless to seek a panacea for such a general problem because every text must be judged for its particular merit with its flaws well in mind, a practice which will underpin the approach taken to any text treated here.

The gestation of Mary Shelley's story as she recorded it in her Preface to the 1831 ('Standard Novels') edition has been the basis of the many repetitive accounts proffered by her biographers and others. Although her Letters and Journal offer evidence that the customary account is substantially true, a major implication for the proper critical evaluation of Frankenstein has usually been overlooked. The form of the novel in which it was first published is an augmented form; in the author's initial conception the story of Victor Frankenstein and his hideous creation was really little more than an inspired, psychological tale of terror.

> At the head of a sheet of clean white paper Mary wrote, 'It was on a dreary night of November that I beheld the accomplishment of my toils', and on that June day in 1816 Frankenstein was born. It was to prove a prodigy, a marvellous, flawed but awesome creation: a monster hit that spanned time and place to become a part of modern mythology.
>
> 15.

Frankenstein was 'born' at what would become Chapter Five of the augmented story, and so one may safely infer that Mary Shelley's initial plan did not include the opening epistolary narrative of Walton or the first four chapters of the novel in its final form. This is significant because it is in those first four chapters that Frankenstein speaks to Walton of an educational progress which had taken him

from the 'wild fancies' of writers such as Paracelsus, Albertus Magnus and Cornelius Agrippa to the 'discovery and wonder' of contemporary science in general, and scientific reseach in particular. Moreover, the introduction of Walton was a crucial addition to what was at first simply the story of a battle for ascendancy between hideous creation and mortal creator, a daring, modern Prometheus plasticator(16). This hubristic endeavour was in itself not particularly original (cf. the 'Golem', a monster allegedly at the command of the Hebrew priesthood who fashioned it from earth, animating it by means of arcane rites; or the parallel idea of the alchemical homunculus). Therefore, while it is clear that in the original conception of the story Frankenstein is in some respects a promethean figure, using 'instruments of life' to infuse a 'spark of being' into a composite human frame, it is not particularly evident that he is a scientist, nor is it apparent that the author's initial intention was to question scientific innovation quite in the deliberate way it has sometimes been assumed she did:

> It is ironic and perhaps indicative that the first major science fiction novel is essentially an anti-science anti-progress science fiction novel. Mary Shelley was obviously feeling the hot breath of the winds of change, and felt that someone should hold up a warning sign to the effect that Science and Progress weren't necessarily going to result in the best of everything.
>
> 17.

While few would deny that in Frankenstein science is the means by which the sequence of events is precipitated, such science as figures in the narrative is not science as we have come to know it - as Mary Shelley's account of her 'waking dream' indicates clearly: 'I saw the pale student of unhallowed arts kneeling beside the thing he had put together.'(p.263) This horrid vision was the basis of the story of scientific terror which is Frankenstein in its final shape, for in its

original form, it was little more than a conventionally Gothic dark romance of 'unhallowed arts.' However, by the time it was completed Percy Shelley (who anonymously wrote the Preface for his wife) could claim that 'the event upon which the story depends is exempt from the disadvantages of a mere tale of spectres or enchantment', having already asserted that, 'I have not considered myself as merely weaving a series of supernatural terrors.'(Preface; p.267) Science in Mary Shelley's novel was utilized as a means of inventing a novel plausibility for what is essentially a Gothic tale; nevertheless, given the direct way in which she employed science, Frankenstein is something more than simply an attempt to produce a compelling or 'realistic' Gothic novel.

Frankenstein contains three levels of narrative, each with its own narrator (James Gunn mentions only two; 18): the primary being epistolary, given by Robert Walton in a series of letters addressed to his sister in England concerning his own quest and containing both of the others. The secondary level, which is also the novel's main narrative (as the chapter distribution of the novel emphasises), is given by Victor Frankenstein (Walton undertakes 'to record, as nearly as possible in his own words, what he has related' for his sister). Frankenstein's personal narrative also conveys that of the experiences of his creature and he relates to Walton what it told him, that narrative between creator and creature being the tertiary level of the novel's narrative structure. This complex structure is one of the strengths of the novel since it permits treatment of both sides of the creation issue.

Mary Shelley deftly employs in her novel what at first sight may appear to be a rather difficult and involved narrative structure to

emphasise two crucial relationships centred upon Frankenstein. In one of these the relationship is that which, as fellow scientists, Walton and Frankenstein share. The other, and by far the more ironic, is between Frankenstein and his creature. This latter relationship (underpinned by Paradise Lost) is used to set the sequence of events central to Frankenstein in a Christian moral framework, with Victor Frankenstein's act of scientific, profane creation being contrasted with real godly creation. Thus Frankenstein's story is told against two diverse backgrounds, one spiritual, the other materialistic; and if we look more closely into how the author evokes them the provenance of the conflicts which arise out of their conjunction will perhaps become clearer.

Frankenstein's scientific perspective was formed during his education at the University of Ingolstadt as a student of Professor Waldman. Waldman is favourably contrasted to the other university scientist Frankenstein meets early in his career, Professor Krempe. Krempe alienates Frankenstein almost immediately by pouring scorn upon his youthful interest in alchemy:

> 'Good God! In what desert land have you lived, where no one was kind enough to inform you that these fancies which you have so greedily imbibed are a thousand years old and as musty as they are ancient? I little expected, in this enlightened and scientific age, to find a disciple of Albertus Magnus and Paracelsus. My dear sir, you must begin your studies entirely anew!'
>
> Frankenstein, chap.3 (p.305)

Frankenstein does begin his studies afresh, but under the guidance of Waldman(19). Waldman's outlook, though apparently no less 'enlightened and scientific' than Krempe's, is more closely in harmony with Frankenstein's own compulsive inquisitiveness into the processes of the physical world ('the natural world') which had prompted his study

of alchemy. Indeed, in his panegyric of 'modern chemistry' which inspires Frankenstein to apply himself to the study of the science, the professor reveals a scientific sensibility in which the knowledge gained from the investigation of natural processes is seen as a means of gaining control of them:

> '...these philosophers, whose hands seem only made to dabble in dirt, and their eyes to pore over the microscope or crucible, have indeed performed miracles. They penetrate into the recesses of Nature and show how she works in her hiding places. They ascend into the heavens; they have discovered how the blood circulates, and the nature of the air we breathe. They have acquired new and almost unlimited powers; they can command the thunders of heaven, mimic the earthquake, and even mock the invisible world with its own shadows.'
>
> Frankenstein, chap.3 (p.307)

Waldman's hyperbolic paean to the power of science provoked a profound excitement in Frankenstein, so lately turned from the hermetic syllogisms of alchemy. Although Waldman's visionary utterance is prefaced by the admission that the aims of contemporary scientists ('they promise very little') are much more limited than those of the alchemists, his 'modern' sensibility is not wholly devoid of a similar hysteria ('they can even mock the invisible world with its own shadows' he excitedly proclaims) which has its roots in esotetric ritual:

> Magic was originally the appurtenance of religion; and when religion cast it off, it subsisted in the outer darkness along with appetites and curiosities which religion proscribed. Between magic and science... the lines were not yet sharply drawn.
>
> 20.

Such qualification as Waldman allows is quite overwhelmed by his subsequent assertions of the quasi-superhuman powers won by scientists, and therefore the science for which Waldman speaks as an advocate to Frankenstein is as attractive in most respects to the student as alchemy had been. Thus Waldman performs the function of linking the "modern" scientific sensibility with its painstaking and seemingly

trivial practices ('whose hands seem only made to dabble in dirt') with the arcane pursuits of the alchemist: the ends to be attained are conflated by Waldman. In his turn, the student enthusiastically projects his own grand vistas of achievement:

> So much has been done, exclaimed the soul of Frankenstein - more, far more will I achieve; treading in the steps already marked, I will pioneer a new way, explore unknown powers, and unfold to the world the deepest mysteries of creation.
> Frankenstein, chap.3 (p.308)

Speaking so eloquently of the humanistic, spiritual impulse which fired him, Frankenstein seems to justify his author's choice of subtitle for her work, 'The Modern Prometheus' in one sense at least. The outlook of this aspiring scientist is indisputably "modern", for he would 'pour a torrent of light into our dark world' at a time when Newtonian mechanics and optics shone with unparalleled lucidity. Furthermore, the object of his quest and the source of the knowledge he aims to 'unfold to the world', a process by which life itself could be created anew, is indeed worthy of a latter-day Prometheus:

> ...when I considered the improvement which every day takes place in science and mechanics, I was encouraged to hope my present attempts would at least lay the foundations of future success. Nor could I consider the magnitude and complexity of my plan as any argument of its impracticability. It was with these feelings that I began the creation of a human being.
> Frankenstein, chap.4 (p.314)

However, Frankenstein's motives are more complex than simply those of an idealistic humanist unmindful of scriptural injunctions upon our native curiosity and aspiration, and hardened by familiarity with the contents of charnel houses. Though he had claimed to want to extend the range of human knowledge, and thence (or so he believed) produce an improvement in the general human condition, he confesses to Walton retrospectively that he had also yearned to 'explore new

powers'. He thereby reveals a degree of sustained self-interest in the results of his efforts no less prominent than that of his twentieth-century fellows vilified by generic moralists and religious writers like C.S. Lewis and Walter M. Miller. This 'Prometheus' is, of course, less altruistic than he at first sight appears; and, at the risk of labouring the points already made about this influential novel, an examination of a few of his literary forebears may reveal more about why Frankenstein's Gothic visions have so many echoes in contemporary science fiction.

When Victor describes his particular vision of the new society which will follow from his research, his hubristic impulse to usurp the divine prerogative of creation is revealed quite starkly: 'A new species would bless me as its creator and source; many happy and excellent natures would owe their being to me.' (p.314)

Here, then, is the true magnitude of his ambition. Frankenstein seeks nothing less than to arrogate to himself the prestige and power of godhood, the recognition of which would proceed from those 'many happy and excellent natures' he would create. His vision exactly matches the activities of the sardonic, irreligious persona of Johann Wolfgang von Goethe's early poem, 'Prometheus'(ca.1772):

> Here sit I, fashion men
> In mine own image --
> A race to be like me,
> To weep and suffer,
> To be happy and enjoy themselves,
> All careless of thee too,
> As I!
>
> 21.

Goethe's blasphemous little poem serves as an apt reminder of the currency of these ideas among some of the European literati of the day (22). In fact, his influence is pervasive in Frankenstein: sometimes evident, but probably as often not clearly acknowledged. For instance,

in the latter half of the novel, part of the creature's incredible self-education is accomplished through reading the '*Sorrows of Werter*', which is surely a reference to Goethe's first novel, *The Sorrows of Young Werther*, published over forty years before in 1774. It is clear from allusions in *Frankenstein* (voiced by the creature) such as, 'I thought Werter himself a more divine being than I had ever beheld or imagined; his character contained no pretension, but it sank deep. The disquisitions upon death and suicide were calculated to fill me with wonder.'(chap.15; p.395), that Mary Shelley had read and prized the novel. Incidentally, her care to provide her story with a scientific rationale is further attested by her decision not to model the promethean scientist upon Prospero, his magic and his books, given her debt to *The Tempest* in evoking the ignorant rapture felt by Frankenstein's *idiot savant* creature adrift in the world. However, another work by Goethe which may have had a significant influence(23) is *Faust:Erster Teil* (1808), the first part of his *Faust*. Goethe's play includes this exchange between an aspiring student and Mephistopheles which rather anticipates some features of Mary Shelley's book:

> STUDENT.
> I scarce can bring myself to take my leave.
> One kindness undertake on my behalf:
> Inscribe my book, Sir, with your autograph.
> MEPHISTOPHELES.
> With pleasure.
> (He takes the book, writes in it, and hands it back.)
> STUDENT(reading).
> *Eritis sicut Deus, scientes bonum et malum.*
> (He closes the book reverently, and ceremoniously takes his leave.)
> MEPHISTOPHELES(alone).
> Follow the adage of my cousin Snake.
> From dreams of god-like knowledge you will wake
> To fear, in which your very soul shall quake.
> *Faust: Part One*
> 24.

Mary Shelley is nonetheless careful not to cast Waldman in the role of Mephistopheles. Although Frankenstein later remarks to Walton, 'Thus ended a day memorable to me; it decided my future destiny,' he is referring not just to the inspirational way in which his visions of glory crowded in upon him, but more directly to his introduction to science as a discipline and methodology. The science to which Frankenstein the student was introduced by Prof. Waldman is, however, still the natural philosophy of the time:

> In the early days of science, it was believed that the truth lay all around us - was there for the taking, waiting, like a crop of corn, only to be harvested and brought in. The truth would make itself known to us if only we would observe nature...
>
> 25.

Thus an eminent twentieth-century scientist, P.B.Medawar, writing on 'Baconian experimentation' can also speak directly to the central idea of Waldman's, and hence, Frankenstein's, scientific perspective - the assumption that the physical world is like an enormous puzzle which would readily reveal potent secrets to the natural philosopher who saw it clearly and understood its forces and equilibria.

Although Frankenstein speaks of his intentions in terms of divine power, during at least the early stages of his endeavours his view of life itself and of the world in which it exists is not complicated by religious sentiments or tenets. He makes explicit the scepticism of the supernatural upon which his materialistic sensibility is founded when he describes the line of approach he followed in his first investigations:

> To examine the causes of life, we must first have recourse to death. I became acquainted with the science of anatomy, but this was not sufficient; I must also observe the natural decay and corruption of the human body. In my education my father had taken the greatest precautions that my mind should be impressed with no

> supernatural horrors. I do not ever remember to have trembled at a tale of superstition or to have feared the apparition of a spirit. Darkness had no effect upon my fancy, and a churchyard was to me merely the receptacle of bodies deprived of life, which, from the seat of beauty and strength, had become food for the worm.
>
> Frankenstein, chap.4 (pp.311-312)

Frankenstein claims to have been unmoved by his macabre toils, but his composure is intended to be exceptional - perhaps encouraging the reader to mistrust him all the more by showing how effectively such a dangerous scientist may suppress his own emotional responses. Ghoulish and repulsive though they are, the story of his researches and the knowledge he has won through them excite Walton:

> I see by your eagerness and the wonder and hope which your eyes express, my friend, that you hope to be informed of the secret with which I am acquainted; that cannot be; listen patiently to the end of my story, and you will easily perceive why I am reserved upon that subject. I will not lead you on, unguarded and ardent as I then was, to your destruction and infallible misery.
>
> Frankenstein, chap.4 (p.313)

He dashes Walton's 'wonder and hope' with a grim warning. He reflects on the suffering his efforts have caused, and we are reminded of his situation aboard Walton's ship. Exhausted and near death himself, he is now obsessed with the destruction of his creature, and all too aware of his inability to perform the task. Events have gone full circle, and ironically the scientist who has courted madness in his quest for the secret of life is incapable of reversing what he achieved by playing God with the human frame and spirit. His memories are darkened by his experience of the consequences of his meddling.

Frankenstein's narrative next deals with the construction of a human frame to which he can apply the techniques he has discovered 'for bestowing animation upon lifeless matter.' In speaking of how he has worked with 'profane fingers' in his 'workshop of filthy creation'

(p.315), he now reveals guilt, the product of a troubled conscience. Moreover, the connotative terms he uses suggest that the morality he is convinced he flaunted in his experiments is a religious, rather than secular, code. Mary Shelley's main scientific protagonist thus is a dynamic character: his outlook has been driven beyond the self-centred materialism which has dominated his character before his act of blasphemous creation by his experiences after it.

Frankenstein and Waldman are "Baconian" scientists, scrutinising the natural world in pursuit of information of advantage to humanity, but more immediately, to themselves. However, unlike the necromancer or alchemist of old with whom they share a common visionary thirst for power, they pursue science rather than magic for their ends. Moreover, Frankenstein's science is not particularly well-defined or materialistic, the rather hermetic task he set himself being to try to 'infuse a spark of being' into a composite human frame. His endeavours have a transcendental quality, which he implicitly recognises. Therefore, his science is a means towards the achievement of a magical goal, though his vivisectionist methodology is mundane - he 'tortured the living animal to animate the lifeless clay.'

There was little popular understanding of the authentic science of Mary Shelley's day, and most of even that now seems fairly commonplace. True, Newton's laws of physics had helped establish a new scientific perspective which in time would allow the scope of the sciences to be much better defined, but there remained many unknown quantities in the physical sciences such as galvanism, the early study of electrical phenomena. Yet the characterisation of Frankenstein the scientist is not 'modern', even by prevailing contemporary standards;

Krempe's attitude is more nearly that of the professional scientist. However, Frankenstein can be seen as a Baconian scientist in an even more literal way, for in Francis Bacon's The New Atlantis one aspect of the researches carried out in the House of Saloman rather neatly anticipates Frankenstein's methodology:

> "We have also parks, and enclosures of all sorts, of beasts and birds; which we use not only for view or rareness, but likewise for dissections and trials, that thereby we may take light what may be wrought upon the body of man. Wherein we find many strange effects: as continuing life in them, though divers parts, which you account vital, be perished and taken forth; resuscitating of some that seem dead in appearance, and the like...."
>
> The New Atlantis. 26.

While there is no direct evidence available which would confirm that Mary Shelley was familiar with The New Atlantis, an entry in her Journal shortly after she had lost her first baby proves that as early as March 1815, when she was seventeen or so, she had heard of revivification: 'Dream that my little baby came to life again; that it had only been cold, and that we had rubbed it before the fire, and it had lived.' Another English provenance contributing to her particular version of the promethean theme may have been the second Book of Edmund Spenser's The Faerie Queene, a compendious work which the reading lists of her Journal(27) show her to have been familiar with prior to writing Frankenstein. Canto X of Spenser's second Book deals in part with the apocryphal history of the 'faerie' folk, from whom the 'elfin' knights are descended, and Spenser draws on both the Prometheus of Aeschylus and the story of the Creation in Genesis:

> It told, how first Prometheus did create
> A man, of many partes from beasts deriued,
> And then stole fire from heauen, to animate
> His worke, for which he was by Ioue depriued
> Of life him selfe, and hart-strings of an Aegle riued.

That man so made, he called elfe, to weet
Quick, the first authour of all Elfin kind:
Who wandring through the world with wearie feet,
Did in the Gardins of Adonis find
A goodly creature, whom he deemd in mind
To be no earthly wight, but either Spright,
Or Angell, th'authour of all woman kind;
Therefore, a Fay he her according hight,
Of whom all Faeryes spring, and fetch their lignage right.
The Faerie Queene, Book II, Canto X, stanzas 70&71.

Whether or not Mary Shelley was consciously drawing ideas from Spenser is really a moot point; however, the appearance of the Promethean myth in The Faerie Queene (ca.1590) suggests that it was considered interesting long before it was radically popularised by the success of Mary Shelley's novel. Incidentally, Spenser again anticipates not only Frankenstein itself, but perhaps the entire genre of Gothic fiction in Canto XI of the Second Book of his allegorical romance:

Thereat he smitten was with great affright,
And trembling terror did his hart apall,
Ne wist he, what to thinke of that same sight,
Ne what to say, ne what to doe at all;
Ne doubted, least it were some magicall
Illusion, that did beguile his sense,
Or wandring ghost, that wanted funerall,
Or aerie spirit vnder false pretence,
Or hellish feend raysed vp through diuelish science.
The Faerie Queene, II, XI, stanza 39.

A final clue as to the possible influence of Spenser's poem on Frankenstein is to be found in Mary Shelley's Letters. In only one letter did she address her husband as 'Sweet Elf,' the endearment being twice repeated, in a letter written on 5th December 1861; in other words, after Mary and Shelley had returned to England from Switzerland where they had stayed at the Villa Diodati. Mary also writes in the same letter that she has, 'finished the 4.Chap. of Frankenstein which is a very long one & I think you would like it.'(28)

Frankenstein's motivation has been shown above to be both hubristic and humanistic; in these respects he fulfils our expecta-

tions of a stock promethean figure. The knowledge he wishes to gain, and, he professes, to impart is also in some respects a "promethean" gift. As with the legend of the original Prometheus of Greek mythology and his gift of fire to the human race, the promethean gift in Frankenstein is ambiguous, having a constructive or beneficial potential but also possessing a destructive capability. The danger for the recipients lies in how they exploit the promethean gift; to avoid realizing the destructive potential of the gift, its exploitation must be governed by a code of conduct, in social terms, by a moral code. In Frankenstein such a moral code is introduced through the narrative of the scientist's creature. However, in attempting the most convincing characterisation of a materialistic, hubristic scientist Mary Shelley drew upon not only the Promethean myth but upon another, even more familiar stock figure recently given a new currency by one of the Shelleys' favourite European authors, Goethe:

> In Matthew Lewis's The Monk(1795), Ambrosio, a monk known to the world as 'The Man of Holiness', is aided in his decidedly unholy pursuit of Antonia by a magic mirror and the devil himself. Spells and potions were part of the Gothic brew served up in William Beckford's Vathek (1786), Veit Weber's The Sorcerer (1795), and other delicacies on Mary Shelley's reading lists. Invariably, they follow the Faustian pattern; momentary control of super-human forces is followed by a gruesomely described and inevitable eternal punishment.
> 29.

Frankenstein, with his Baconian scientific perspective and his youthful flirtations with alchemy, bears distinct general resemblances to the protagonist of Christopher Marlowe's The Tragic History of Doctor Faustus, who, as the quotation above shows, was adopted by Gothic authors as an egotistical archetype of the hubristic, amoral sceptic so essential to a good story. Frankenstein and Faustus do have some more subtle parallels, but they also have major differences.

Like Marlowe's Faustus, Frankenstein tempted himself. Although it is Waldman who first made science seem so attractive to Frankenstein, the professor of chemistry is not a mephistophelean tempter. Rather, Frankenstein projects for himself vast vistas of achievement ('A new species would bless me as their creator') which induce him to give way to a self-interest composed of ambition and an appetite for divine power:

> Marlowe's protagonists do not simply out-Herod their fellow mortals; they act out their invidious self-comparisons with the gods; and, from Aeneas to Faustus, they see themselves deified in one manner or another. Faustus' Evil Angel holds out the hope that he will be 'on earth as Ioue is in the skie.' Ignoring his Good Angel and the threat of 'Gods heauy wrath', Faustus readily amplifies the enticement, which far outdoes all other Marlovian seductions. He envisages a hierarchy of spirits, answering his queries and serving his whims.
> 30.

Again like Faustus, Frankenstein turns his back on religious morality to pursue his goal; yet this is apostasy, not heresy. Moreover, they both make a final abjuration; for Frankenstein later recognises the dangerous intensity of his drive to create his ideal man:

> Who shall conceive the horrors of my secret toil as I dabbled among the unhallowed damps of the grave or tortured the living animal to animate the lifeless clay? My limbs now tremble, and my eyes swim with the remembrance; but then a resistless and almost frantic impulse urged me forward; I seemed to have lost all soul or reason but for this one pursuit.
> Frankenstein, chap.4 (p.315)

As Faustus had done, Frankenstein suppresses aspects of his moral sensibility in his macabre pursuits which so brutalize his consciousness that he can vivisect cruelly and despoil graves without qualms. Lastly, for Frankenstein as for Faustus, what has been a quest for knowledge for its own sake is transformed into a near-insatiable craving for power:

> His quest for knowledge leads him to taste the fruit of the tree that had shaded Adam and Eve, to savour the distinction between good and evil. From that point he abandons his disinterested pursuit....
>
> 31.

Marlowe's play is some two centuries older than Mary Shelley's novel, and Europe had seen, in the Age of Reason, the rise of logical philosophies and the growth of agnostic scepticism - both, some have argued, at the expense of religion:

> Whitehead in his preface to Science and the Modern World wrote that the various human interests which suggest cosmologies and are influenced by them, are science, aesthetics, ethics, religion. He suggested that during the last three centuries, the cosmology derived from science had been asserting itself at the expense of the older points of view which had their origin elsewhere.
>
> 32.

This may be what lies behind one of the more important differences between these two works: the army of Satan which populates Marlowe's tragedy is notably absent from Frankenstein. Indeed, Frankenstein, unlike Faustus, has no direct experience of the realm of the spirit. Although God is hidden from Faustus, his existence is at least implied by the presence in the necromancer's world of Mephistophiles and the various other demons Faustus encounters. The scientist's alienation from religious and spiritual morality may be partly due to his scepticism, but his view of the world is mechanical and matter-of-fact whereas the alchemist's embraces the arcane and the supernatural. Nevertheless, both are eventually victims of the operation upon them of a retribution which in Faustus' case is clearly shown to be at the disposal of the Creator, whereas in Frankenstein's case its origins are rather less straightforward. In Frankenstein God's existence is never questioned polemically: at no point does the supernatural world intrude into the sublunary except implicitly. Given this, where lies

the provenance in Mary Shelley's Gothic novel of the 'sublime'?

> Beginning in 1756, when Burke published his Philosophical Inquiry into the Origin of Our Ideas of the Sublime and the Beautiful, it became commonplace among both writers and readers to consider the emotions of terror and awe as sources of 'the Sublime' - a ready conduit to ideas of Divinity, Omnipotence, and all Final Things.
>
> 33.

In Frankenstein the author employed a new source of such feelings of overwhelming terror - it is science itself which, by placing within reach of human aspiration the enjoyment of superhuman powers, throws up extremes of suffering as well as visions of glory and power. The fruit of the Tree of Knowledge is again within reach, but the Serpent is now an inner voice inextricably woven into our attitudes and ways of thinking about ourselves(34). This new source of the sublime, then, the terrors which might be unleashed by scientists driven beyond morality rather than beyond reason by logical positivism, materialism, and hubris, gives Frankenstein a greater currency than was furnished by the usual musty Gothic horrors:

> The result of this fusion of 'Gothic' materials and science was not only to bring the tale of horror clearly into the stream of scientific fiction, but also to provide for it a more credible basis.
>
> 35.

The guilt which Frankenstein reveals to Walton is not a product of the amorality with which he has pursued his early investigations, no matter how distasteful and macabre these have been. In fact it stems from his successful attempt to revivify the body which he has cobbled together. However, neither the act of profane creation itself nor his crude attempt to make his creature physically more capable than he is are directly responsible for the succession of extreme and violent events which follow from these: rather, it is Frankenstein's own response to his creation which is the crucial factor. He relates

how, after it first stirred into life, he was suddenly overcome by revulsion for the creature's hideous aspect. Unable to endure the sight of the ugliness with which he had unwittingly endowed it, he fled the room wherein he had administered the 'spark of life' to it and (somewhat improbably) sought refuge in sleep. He recalls that he awoke after having experienced a particularly disturbing nightmare:

> I started from my sleep with horror; a cold dew covered my forehead, my teeth chattered, and every limb became convulsed; when, by the dim and yellow light of the moon, as it forced its way through the window shutters, I beheld the wretch - the miserable monster whom I had created. He might have spoken, but I did not hear; one hand was stretched out, seemingly to detain me, but I escaped and rushed downstairs.
>
> Frankenstein, chap.5 (p.319)

When he goes looking for the 'monster' next day, he finds that it has left his rooms; many months elapse before he encounters it again, during which its primal consciousness has undergone a series of transformations. But the sin for which Frankenstein is to atone in such a painful manner has already occurred. Seeing it to be outwardly hideous, he presumes it to be wholly hideous; fleeing from it, he abdicates whatever responsibility he as its creator owes to it. Later, in a different frame of mind, Frankenstein is confronted with these obligations by the creature itself:

> 'Oh, Frankenstein, be not equitable to every other and trample on me alone, to whom thy justice, and even thy clemency and affection, is most due. Remember that I am thy creature; I ought to be thy Adam, but I am rather the fallen angel whom thou drivest from joy for no misdeed.'
>
> Frankenstein, chap.10 (p.364)

The fundamental nature of this relationship is established when Frankenstein himself begins to recognise the obligations implicit in his act of creation. He has tried to prove he could exercise divine mastery over the forces of life, and though he does bestow life he is

ironically not able to predict or dictate its subsequent responses because he cannot even control his own reactions.

When he meets it again it is already too late for him to redeem either himself or the creature, for both have by then been overtaken by the chain of events his rejection of the 'monster' initiates. While deaths have been caused among the Frankenstein family and their less-exalted neighbours by its vengeful intervention, the creature asserts that its sense of vengeance is an acquired trait instilled by its direct experience of mankind. It goes on to relate to Frankenstein how it was soon innocently engaged by the rustic world into which it had fled having been spurned inexplicably by its creator:

> I gradually saw plainly the clear stream that supplied me with drink and the trees that shaded me with their foliage. I was delighted when I first discovered that a pleasant sound, which often saluted my ears, proceeded from the throats of the little winged animals who had often intercepted the light from my eyes.
> Frankenstein, chap.11 (p.368)

As the creature quickly discovers, the world is also inhabited by the ungentle descendants of an older Adam. Mankind teaches it to discriminate, to fear and to hate; irredeemably changed, that hatred will be ultimately directed against its creator.

Many of the arguments it puts forward to Frankenstein when they finally meet are drawn from Milton's account of Adam's first days in the Garden. By then, though, unlike Adam it has already undergone its version of the Fall, for it has killed. The recognition of this guilt is foremost in the creature's mind when it relates to Frankenstein its response to Paradise Lost: 'Many times I considered Satan as the fitter emblem of my condition'(chap.15, p.396) By the time they meet the creature is no longer the Noble Savage of its first condition. It has been transformed into a luciferian archetype, a 'fallen angel'

even in its own eyes, by having succumbed to dark impulses it could not understand or even hope to control because in its primal state it lacked moral awareness of any sort. Yet even here Mary Shelley's humanistic rather than Calvinistic sensibility is evident when the 'monster' tells its maker, 'I am malicious because I am miserable.' (chap.17, p.412)

Although Frankenstein knows it to be a murderer, he is initially moved to pity the creature and decides to provide a mate for it in the hope that the killing will then stop. Having resorted to a remote Hebridean island accompanied by his first creature, Frankenstein almost completes a mate for it when the vision of the race of hideous creatures which might then be produced prompts him to destroy the second one. His surviving first creature is thereby transformed finally into an avenging 'daemon'; and when it tells Frankenstein, 'I shall be with you on your wedding night.'(chap.20, p.438), the Gothic pattern becomes fully established, as Martin Tropp, commenting upon the psychological structure of Frankenstein, has noted:

> Frankenstein reflects this Gothic tradition in the characterisation of scientist and Monster, the pattern of pursuit that links them both, and the persistent feeling of evil close at hand.
>
> A subspecies of Gothicism played directly upon the theme of the divided self; derived from ancient and nearly universal legend, the Doppelganger tale may well have helped Mrs. Shelley give form to her dream of self-destruction.
>
> 36.

Linked together by mutual hatred, Frankenstein and his creature take it in turns to pursue each other across increasingly dark, barren landscapes or wild seascapes. First the creature fulfils its threat by murdering Frankenstein's bride on their wedding-night; then Frankenstein sets out to destroy his hideous creation, who in turn draws its maker across the seas and into the vast icy wastes of the north where

it has a physical advantage:

> The image of boats and water not only ties the two sides of scientist-monster together - it also chronicles the transfer of power from maker to Monster.
> 37.

Whether or not one is inclined to accept Tropp's premise fully, it does suggest that Mary Shelley's construction of her story is quite deliberately ironic. While her scientist has achieved most of that which he set out to do, the outcome has been but an inverted travesty of his hopes. The final act of the Gothic melodrama of her novel takes place on board Walton's ship. Frankenstein has died, worn out by his obsessive pursuit of the creature to exact the price of his vengeance. The creature, stealing aboard to cast a last look upon its mortal creator, anticipates its own lonely suicide while acknowledging the comprehensiveness of its fall from grace: 'the fallen angel becomes a malignant devil.' It then vanishes from Walton's sight into the vast wastes of the polar regions.

In Frankenstein, science is used to a larger purpose than merely the provision of a delectable new sort of frisson for the author's readers, although in terms of the Gothic expectations it was designed to meet that aim is competently accomplished. An important reason for using science at all is to try to imbue the novel with a degree of plausibility in an era when science-consciousness was rapidly growing. Another aim, which arose from it, was to make an ethical comment about the social role of science and technology. This emerges in the nature of the relationship between Walton and Frankenstein.

As Walton himself reveals in his fourth letter to England (that is, before Frankenstein's narrative proper has commenced), the attributes that he and Victor Frankenstein both possess are more than

purely temperamental - indeed they are professional:

> He is now much recovered from his illness and is continually on deck, apparently watching for the sledge that preceded his own. Yet, although unhappy, he is not so utterly occupied by his own misery but that he interests himself in the projects of others. He has frequently conversed with me on mine, which I have communicated to him without disguise. He entered attentively into all my arguments in favour of my eventual success and into every minute detail of the measures I had taken to secure it. I was easily led by the sympathy which he evinced to use the language of my heart, to give utterance to the burning ardour of my soul, and to say, with all the fervour that warmed me, how gladly I would sacrifice my fortune, my existence, my every hope, to the furtherance of my enterprise. One man's life or death were but a small price to pay for the acquirement of the knowledge I sought, for the dominion I should acquire and transmit over the elemental foes of our race. As I spoke, a dark gloom spread over my listener's countenance. At first I perceived that he tried to suppress his emotion; he placed his hands before his eyes, and my voice quivered and failed me as I beheld tears trickle fast from between his fingers; a groan burst from his heaving breast. I paused; at length he spoke, in broken accents: 'Unhappy man! Do you share my madness? Have you drunk also of the intoxicating draught? Hear me; let me reveal my tale, and you will dash the cup from your lips!'
>
> Frankenstein, Letter 4 (pp.283-284)

By pitching Walton's character so close to Frankenstein's(38), Mary Shelley implies that both share a similarly Baconian scientific outlook. When towards the end of the novel the narrative returns to Walton and his letters we find him facing a threatened mutiny and receiving conflicting advice from Frankenstein, who also tries unsuccessfully to harangue the crew into going on with the voyage as Walton seems to wish. Taking Waldman also into account, it is clear that the scientists of Frankenstein (with the exception of the testy Krempe, whose role is in any case fairly tangential) all conform to a pattern, possessing the same sort of scientific perspective and motivation. Thus they represent the contemporary scientific sensibility, according to Mary Shelley, whose values she asserts in Frankenstein to

be paradigms of the potentially destructive materialism of science and technology. Even Frankenstein himself at times seems to endorse this view of science and scientists, though paradoxically his ultimate view tends to contradict rather than confirm it. Nevertheless, it seems that he does after all want to dissuade Walton from his quest, and tries to convince Walton of the danger inherent in his attitude. To this end, he adduces his own story; for Frankenstein as for Faustus, 'the fruit of experience is disillusionment.'(39) In Frankenstein's case, his own disillusionment - the source of his new-found conscience - prompts him to warn Walton, however confusedly. Yet even in extremis, he remains ambivalent about scientific discovery, however harrowing and disastrous his forceful ethical education has been - 'Yet why do I say this? I have myself been blasted in these hopes, yet another may succeed.'(p.491)

Early in Frankenstein's narrative Mary Shelley has him remind us of Walton's presence and the scientist's reason for telling the explorer the daunting facts of his own experience; this time, the author makes the theme of her novel quite explicit, and once again stresses the nature of the obsessive scientific perspective they share:

> 'Learn from me, if not by my precepts, at least by my example, how dangerous is the acquirement of knowledge and how much happier that man is who believes his native town to be the whole world, than he who aspires to become greater than his nature will allow.'
> Frankenstein, chap.4 (p.313)

Frankenstein already knows that Walton the explorer is motivated by a similar thirst for knowledge in his pursuit of the geographical investigation of the Arctic regions (wherein he encounters Frankenstein and sets down his doomed fellow's narrative), a craving to which he had himself been subject. In warning Walton about 'how dangerous is

the acquirement of knowledge' Frankenstein adopts a geographical metaphor to extol the happiness which he asserts is the lot of the man whose ignorance is not a burden to him, favourably contrasting this rather complacent figure with the restless scientific humanist 'who aspires to become greater than his nature will allow' - a clear allusion to himself, and, one could perhaps infer, to a Creator who chose to limit the faculties and sensibility of Man. Of course, the geographical metaphor also brings the ethical and moral concerns associated with Frankenstein's narrative into Walton's own situation. It reminds us that Walton the explorer himself faces a testing moral dilemma in whether or not to continue his voyage into the unknown by forcing his men on against their will. 'Learn from me...by my example,' Frankenstein urges him. Clearly, Frankenstein's tale is intended to serve as a moral exemplum for Walton, who in turn acts as a kind of foil to Frankenstein. The outlook of both is similar in every respect except that now Frankenstein's is informed by a species of conscience (the product of the experiences of one who had aspired to 'become greater than his nature would allow') whereas for Walton, himself on the threshold of a similarly speculative venture, the prospect is a tormenting temptation. Here is revealed, then, the true nature of the scientists of Mary Shelley's novel; they, like Faustus, are compulsive 'over-reachers' engaged in trying to improve their lives by surpassing themselves, transcending the limitations which restrict their perception and world-view, or, ultimately, even trying to outdo a God whom they resent or whose powers they covet (assuming, of course, they even acknowledge his existence in the first place):

> In Tamburlaine the emblem of tragic pride is Phaethon, rashly attempting to drive the fiery chariot of the sun. In Doctor Faustus it is Icarus... In each instance, it is a question of flying too high, of falling from the

> loftiest height imaginable, of seeking illumination and finding more heat than light. Faustus prefers...to seek what flies beyond his reach; he is accused...of trying 'to ouer-reach the Diuell'.
>
> 40.

Walton serves the author's ostensible moral purpose when it is revealed towards the end of the novel that his decision is to return home rather than risk all, including the lives of his crew, in continuing his quest. Unlike Frankenstein before him, he has recognised the unique moral responsibility which is the scientist's, and so Frankenstein's story is further established as an exemplum. It seems clear that Mary Shelley's intention was to expose the threat of scientists for whom moral and ethical concerns seem to be only inconveniences which baulk the credulous or devout. While it may be true that the arcane science she portrays in Frankenstein was outmoded even by the standards of her own times, the fear of the amoral fervour of the unscrupulous scientist remains as strong today as it ever was, and perhaps for some familiar with the even greater pathological potential of contemporary science, is all the more strongly felt.

Unfortunately, the characterisation of Victor Frankenstein is too shallow to bear the strain his author latterly imposes on it in trying to inflate him into a tragic hero. While she does manage to suggest that his dormant conscience has been awakened by his sublime experiences, her attempt to make him seem to be aware of a more complex perspective is not wholly successful. As a result, his final state of mind arguably owes more to simple confusion than tragic ambiguity.

The same applies to her attempt to show that Frankenstein's quest for knowledge has brought him an unsought wisdom, for although he is certainly disillusioned and his confession to Walton is supposed to give the other scientist the benefit of his acquired self-knowledge,

at the end of it all Frankenstein does not seem to be any the wiser. This of course raises the question of what she was trying to achieve in reducing her formerly unshakeable, implacable hubrist to a vacillating, enfeebled wretch, and undoubtedly the need to show him in some way subject to retribution for his daring did influence her thinking. However, were that her sole intention it would arguably have been more coherent to show him unregenerate to the end, but ultimately the scientist seems more confused than sorrowful or implacable. Moreover, his guilt stems more from his failure and the knowledge of the consequences of it than from a deliberate intention to flout religious morality and ethics, which he saw as being immaterial. Yet in an elliptical way Mary Shelley does imply that the confusion which besets Frankenstein at the very end is the product of moral uncertainty - Victor's last vision is not of his eagerly sought immortalisation as a self-liberating hubrist, but perhaps is a belated recognition that unprincipled humanism may indeed be dangerous.

Frankenstein can be seen as the prototype science fiction novel not only because it introduced a new source of 'sublime' sensations to reader and writer alike, but because it dealt with the relationship between the scientist, his methodology, and his discoveries. A moral dimension was also introduced with this new authorial stress on the scientist's responsibility for the application of what he has revealed, which in a more general sense is his responsibility for the technology resulting from his research. Undoubtedly a flawed book which does too readily lapse into sentimentality for its own sake, this novel nonetheless stands on the threshold of a new genre of popular literature in which the most optimistic and most pessimistic perspectives of human

nature are set against a background of that moral ambiguity which many regard as a more or less intrinsic feature of modern technological society. Frankenstein's debilitating moral confusion is the characteristic affliction of the reluctant heroes and unwilling messiahs (such as Gallinger, below) of later science fiction.

The legacy of this 'first major science fiction novel' was indeed substantial, to judge by the many themes now firmly established in the genre which were first seen together in Mary Shelley's novel. To take just one to provide a concise example, witness the sheer number and variety of "doppelgangers" which figure in science fiction, particularly the artificial doppelgangers, the robots, computers, and androids which, suffering derangements, turn against their human creators or owners(41). Furthermore, usually mankind's creations are superhumanly strong(42), and in turning upon their masters such prodigies become in many respects analogous to Frankenstein's eight feet tall creature; all attest the lasting influence of Mary Shelley's hubristic scientist and his hideous prodigy.

In Frankenstein, Mary Shelley follows tradition and Milton in using the twin symbols of light and darkness: unfallen creatures are creatures of the light; creatures fallen from grace dwell in darkness. Moreover, she alludes to the poignancy of the Miltonic Lucifer's Fall in evoking the downward transformation of Frankenstein's creature, from Noble Savage to 'fallen angel'. Nelson Bond's story 'The Cunning of the Beast,' with which this discussion of the influence of Frankenstein upon later science fiction began, is worth another look now because its author deliberately sets aside these conventions.

It was noted earlier that Bond's story also features a creation myth which is a version of Genesis - the creatures ('beasts' 43) are

Adam and Eve. Strangely, though, they are completely at ease in an environment which their creator finds threatening because his race is susceptible in the atmosphere of the world where the story is set. They need not fear the dark, but their creator does. Incidentally, the fall from grace in Bond's story relates not to Adam and Eve as one might have been led to expect, but to the Yawa for he shares their banishment. The loss is his, not theirs: although Bond's rather sentimental Adam regrets his actions, Eve is quite unregenerate; the humans have lost nothing, their creator, all. Alas, the poignancy of the Miltonic Fall is reduced in Bond's trite story to being little more than the irony of the fate of a fairly impotent Creator who stood in the way of human aspirations fearlessly pursued by the She:

> On her features was scorn; on her lips pride, anger, and rebellion.
>
> And she cried defiantly, "Yea, even I, my lord. It was I who showed the He how to build the garments. I, too, who read the books and learned the secret of making the flame which explodes, the fire that destroys, of smashing the Masters' domes..."
>
> 'The Cunning of the Beast,' p.40

The Yawa's troubles are caused by a determined assertion of human qualities. Eve's crime is committed in acquiring the knowledge (science) placed under an interdict by her maker, and their technological application of this knowledge provides the means whereby Adam and Eve can destroy the Yawa's ascendancy. This same act of 'rebellion' proves that the human spirit is not merely animal: '"...by their very rebellion have these creatures proven the existence of their souls."'(p.41) One is reminded of Roger Zelazny's much finer story, 'A Rose for Ecclesiastes'(1972;44) and his narrator Gallinger's assertion to the moribund Martians: 'It is the hubris of rationalism to always attack the prophet, the mystic, the god. It is our blasphemy which has made us great, and will sustain us, and which the gods

secretly admire in us.'(p.130)

Caught up in the destiny of an entire people, Gallinger takes on the heavy task of trying to dissuade the last inhabitants of a dying planet from accepting the end of their race. The Martians have consulted their religious texts and concluded that their extinction is fore-ordained. Their men have become sterile, but as the outcome of Gallinger's seduction by Braxa has revealed, interbreeding between their two races is a viable solution. However, logic alone is not sufficient to prevail against their beliefs; he must find a more telling argument. Inspiration comes to the rescue in the form of an exposition which he thinks could disabuse the Martians of their fatalism.

Gallinger, a poet of some distinction and the philologist of the expedition, has been polishing his own grasp of the Martian 'High Tongue' by translating the Book of Ecclesiastes into this Martian ritual idiom. His own race has managed to overcome the worst effects of the defeatism which their version of the Martian 'Book of Locar' sanctified, as the very presence on Mars of the Earth expedition attests. He decides to preach them a message of defiance and hope:

> If I read them the Book of Ecclesiastes - if I read them a greater piece of literature than any Locar ever wrote - and as somber - and as pessimistic - and showed them that our race had gone on despite one man's condemning all of life in the highest poetry - showed them that the vanity he had mocked had borne us to the Heavens - would they believe it - would they change their minds?
>
> I ground out my cigarette on the beautiful floor, and found my notebook. A strange fury rose within me as I stood.
>
> And I walked into the Temple to preach the Black Gospel according to Gallinger, from the Book of Life.
>
> 'A Rose for Ecclesiastes,' (pp.128-129)

Yet an ironic denouement awaits this egomaniacal, sceptical humanist. Reeling with fatigue after by his marathon tirade against the passivity of the Martians, and convinced of the failure of his efforts, he is

taken completely aback when M'Cwyie addresses him as 'holy man.' He quickly and earnestly declines the acclamation: 'I'm not a holy man... Just a second-rate poet with a bad case of hubris.' However, when she mentions the fulfillment of a prophecy, he rather crossly demands an explanation. Her reply staggers him:

> 'The Promise of Locar,' she replied, as though the explaining were unnecessary, 'that a holy man would come from the Heavens to save us in our last hours, if all the dances of Locar were completed. He would defeat the Fist of Malaan and bring us life.'
> 'How?'
> 'As with Braxa, and as the example in the Temple.'
> 'Example?'
> 'You read us his words, as great as Locar's. You read to us how there is "nothing new under the sun." And you mocked his words as you read them - showing us a new thing.
> 'There has never been a flower on Mars,' she said, but we will learn to grow them.
> 'You are the Sacred Scoffer,' she finished. 'He-Who-Must-Mock-in-the-Temple - you go shod on holy ground.'
> 'A Rose for Ecclesiastes,' (p.131)

There is even more dismal news in store. M'Cwyie reveals that Braxa's involvement with him has not been, as he has blithely assumed, founded simply upon a genuine attraction to him, but is in accordance with an historic plan enshrined in the Martian scriptures. She has been carrying out a duty to which she has long ago been assigned, and she does not wish to see him again as she has not fallen in love with him during their affair. Completely disheartened, he can only to return to his vessel, where he will unsuccessfully attempt suicide.

The irony of the situation in which he now finds himself is not lost on Gallinger: '<u>I have conquered thee, Malaan - and the victory is thine. Rest easy on thy starry bed. God damned!</u>'(p.132) In arguing so strenuously against the religion of the Martians, Gallinger has paradoxically been instrumental in fulfilling its prophecies and thus implicitly confirming their veracity. Far from liberating them from an

oppressive, primitive, orthodox faith he has unwillingly convinced them that they were right to trust in their Providence after all. His own despair is not just the aftermath of a betrayed love, but is more profound, for Mars has reduced his much-vaunted hubris to fairly vapid, ethnocentric posturing, and overwhelmed his scepticism.

Both Bond and Zelazny seem to have followed Mary Shelley's lead to some extent, for both authors adopt a similar approach to hers in equating the acquisition of forbidden knowledge or the adoption of a rationalistic perspective with an hubris which holds out the promise of self-fulfilment. In Bond's story, an interdict on knowledge is defied and human attributes are vindicated; in Zelazny's, the interdict is thought by Gallinger to be false, for it prevents the Martians from adopting rationalism as an alternative to religious Providence, and he accordingly urges upon them an hubristic self-assertion which they in fact do not want or need, their lives - and his - having been predetermined by an inscrutable, superhuman agency.

Samuel Butler's Erewhon(1872) and its sequel present the most elaborate and telling rationalistic satire against a religion in early science fiction. Butler's nineteenth-century fantasies present the twin archetypal factitious religions: in the Erewhonian 'musical banks' he satirically sent up both of the twin contemporary obsessions of commercial exchange and 'respectable' Anglican propriety; and in a further development of the device in the sequel (discussed fully in Chapter 7), his professedly fallible protagonist Higgs became the literal deus absconditus of a new faith, the messianic Sunchild. In its own way Erewhon is arguably as seminal a work as Frankenstein even if it never has attained the popular status of Mary Shelley's novel.

Tiring of life as a shepherd on a colonial sheep station, Higgs sets off on a journey of speculative exploration into the unknown hinterland accompanied by Chowbok, a native guide. Higgs's motives are characteristically those of the Faustian hubrist: a distinctive streak of self-interest (which shows itself in his palpable desire for wealth) and an obsessive curiosity nurtured by his disatisfaction with the dullness of his present circumstances. Although Chowbok abandons him soon after they enter the mountain fastnesses unexplored by the colonists, we know of his eventual success since he has already feverishly reported it in the very first page of Erewhon, the account of his adventures. He has conceded that he has not yet capitalized upon it, but:

> It is true, I imagine myself to have made a discovery which, if I can be the first to profit by it, will bring me a recompense beyond all money computation, and secure me a position such has not been attained by more than some fifteen or sixteen persons, since the creation of the universe.
>
> 45.

While Higgs reveals no more of this seemingly millenial secret, he does betray that unmistakeable charismatic excitement with which Mary Shelley endowed her deranged scientist, Victor Frankenstein; and like his literary ancestor, Higgs's self-centred aspirations (however hyperbolized by Butler) owe much more to Doctor Faustus than to Prometheus.

After enduring some privation, Higgs toils past the huge statues which guard the only pass into Erewhon, having overcome his own terror of the weird, other-worldly noises they utter. Now he fully understands Chowbok's reluctance to travel into the mountains, and it is clear that even he is not immune, seeking recourse to long-neglected prayer in his own pressing need for reassurance:

> Thank Heaven, whatever it was, it was over now. I reasoned with myself, and recovered my firmness. I came convinced that I had only been dreaming more vividly than usual. Soon I began even to laugh, and think what a fool I was to be frightened at nothing, reminding myself that even if I were to come to a bad end it would be no such dreadful matter after all. I said my prayers, a duty which I had too often neglected, and in a little time fell into a really refreshing sleep...
> Erewhon, p.60.

Butler's characterisation of the adventurer is really tongue-in-cheek, particularly when religion comes to the fore in the story. Higgs, with a characteristic lack of modesty, boasts of his Establishment pedigree while relating how he has striven to save Chowbok's heathen soul from perdition:

> ...I had set my heart upon making him a real convert to the Christian religion, which he had already embraced outwardly, though I cannot think that it had taken deep root in his impenetrably stupid nature. I used to catechise him by our camp fire, and explain to him the mysteries of the Trinity and of original sin, with which I was myself familiar, having been the grandson of an archdeacon by my mother's side, to say nothing of the fact that my father was a clergyman of the English Church. Erewhon, p.63.

This seemingly quite selfless philanthropy is quite shallow, however. Higgs's evangelical zeal is usually short-lived; his candour, equally, is more often than not merely apologetics for his veniality ('I am not a much greater hypocrite than other people,' as he later concedes disarmingly). By authorial design Higgs is very much a man of his times, one in whom opportunism and a reluctant religiosity vie in an unequal struggle, particularly since Butler enjoys ironically showing up his sanctimonious self-interest for the get-rich-quick pragmatism it really is. Even the artful Chowbok is a means to an end:

> I was therefore sufficiently qualified for the task, and was the more inclined to it, over and above my real desire to save the unhappy creature from an eternity of torture, by recollecting the promise of St.James, that if any one converted a sinner (which Chowbok surely was) he should hide a multitude of sins. Ibid.

All this reflects, in miniature as it were, both Butler's larger satirical purpose and his method, synthetic and symbolic, which is nowhere more apparent than when Higgs ruefully recollects the outcome of his attempt to enlighten Chowbok:

> Indeed, on the evening of the same day that I baptized him he tried for the twentieth time to steal the brandy, which made me rather unhappy as to whether I could have baptized him rightly. He had a prayer book - more than twenty years old - which had been given him by the missionaries, but the only thing in it which had taken any living hold upon him was the title of Adelaide the Queen Dowager, which he would repeat whenever strongly moved or touched, and which did really seem to have some deep spiritual significance to him, though he could never completely separate her individuality from that of Mary Magdalene, whose name had also fascinated him, though in a less degree.
> Erewhon, p.64.

Higgs clearly despises Chowbok's totemism, ironically ignorant of how his author already has exposed his own religious panic in the passage quoted above.

As he leaves behind him 'the river and the range', the naturalistic description of this account of the journey into Erewhon gives way to disquisitions about the graceful, comely people who live in what Higgs had hoped would be an El Dorado. These recollections prompt an excited Higgs to reveal his 'staggering' discovery:

> To restore the ten lost tribes of Israel to a knowledge of the only truth: here would indeed be an immortal crown of glory! What a position would it not ensure me in the next world; or perhaps even in this! What folly it would be to throw such a chance away! I should rank next to the Apostles, if not as high as they - certainly above the minor prophets, and possibly above any Old Testament writer except Moses and Isaiah. For such a future as this I would sacrifice all that I have without a moment's hesitation, could I be reasonably assured of it. ....I feel now no longer uncertain.
> Erewhon, p.76.

In an age in which Reason seemed more and more likely to eclipse Faith completely, Butler deals Higgs's credibility the ultimate blow

by revealing that his millenial secret is religious rather than technical or scientific, and naively - even fancifully - is very much based on treating a Scriptural apocrypha as literal truth. Nor is this sardonic treatment of his narrator casual, for while deriding the human weaknesses he embodies in his characters is a distinctive and ubiquitous feature of his style, Butler was a forthright critic of the religious observance and sentiment of his day, and rehearsed the religious arguments of Erewhon in a series of earlier non-fiction pieces which were assimilated into the novel.

The well-favoured people of Erewhon enjoy 'wonderful health and grace and beauty', but if their country is an utopia, it is not without peculiarities. Machines, for example, have been banished to museums as a device to allow Butler to satirize Darwin's ideas about evolution. The ancestors of the Erewhonians Higgs encounters generations before had produced a highly-developed, mechanized society but, warned by one of their philosophers of what their growing dependence upon machines would mean, resolved to abandon their efficent machine culture. Butler's ironic argument (in which he attacks both Darwin and the machine culture) is as follows: if creatures develop through meeting circumstantial or environmental challenges, then the special relationship between mankind and machines will cause the machines to develop faster than humans. Humanity will ultimately be weakened:

> In Samuel Butler's witty satire Erewhon(1872), there is a "Book of the Machines" in which Butler suggested that machines were improving faster than people were by forcing people to tend them and develop them. This idea of machine evolution was intended to satirize Darwin. Today, many people hold...that machine evolution is a real process independent of human control.
>
> 46.

As Higgs recalls how he learned of Erewhonian customs, morals and doctrines, the narrative (also supported by a run-of-the-mill romance with the beautiful Arowhena Nosnibor) becomes more discursive. Higgs plays the Gulliver in describing and construing the involved, sometimes seemingly perverse doctrines pursued by the inhabitants of this Shangri-la:

> This is what I gathered. That in that country if a man falls into ill health, or catches any disorder, or fails bodily in any way before he is seventy years old, he is tried before a jury of his countrymen and if convicted is held up to public scorn and sentenced more or less severely as the case may be. ....But if a man forges a cheque, or sets his house on fire, or robs with violence from the person, or does any such things as are criminal in our country, he is either taken to a hospital and most carefully tended at the the public expense, or if he is in good circumstances, he lets it be known to all his friends that he is suffering from a severe fit of immorality....
>
> Erewhon, p.102.

Higgs further reports that Erewhonians customarily seek guidance from a special caste charged with moral cure, the straighteners:

> It is hardly necessary to say that the office of straightener is one which requires long and special training. It stands to reason that he who would cure a moral ailment must be practically acquainted with it in all its bearings. The student..is required to set apart certain seasons for the practice of each vice in turn, as a religious duty. These seasons are called 'fasts,' and are continued by the student until he finds that he really can subdue all the more usual vices in his own person, and hence can advise his patients from the results of his own experience.
>
> Those who intend to be specialists...devote themselves more particularly to the branch in which their practice will mainly lie. Some students have been obliged to continue their exercises during their whole lives, and some devoted men have actually died as martyrs to the drink, or gluttony, or whatever branch of vice they have chosen for their especial study. The greater number, however, take no harm by the excursions into the various departments of vice which it is incumbent upon them to study.
>
> For the Erewhonians hold that unalloyed virtue is not a thing to be immoderately indulged in...
>
> Erewhon, pp.110-111.

A distinctive, even idiosyncratic mixture of unorthodox sense and 'deliberate and sustained illogicalities(47)' is the most notable feature of Butler's handling of moral issues - 'For the Erewhonians hold that unalloyed virtue is not a thing to be immoderately indulged in... The straighteners say that the most that can be truly said for virtue is that there is a considerable balance in its favour, and that it is on the whole a good deal better to be on its side than against it...'(p.111) - there do not seem to be any absolute criteria in their morals. Indeed, the fact that the entire section quoted above is from Butler's final, augmented version of the novel suggests that these are ideas and contentions he emphasises, and not for their value as purely comic invective. He concludes this section by introducing a quiet hint that ultimately the influence of the guardians of Erewhonian morals may be repressive: 'Those men, they say, are best who are not remarkable either for vice or virtue,' a satisfaction with conformity which one recalls was as repellent to Marlowe's hubrist Faustus as it was to Smith, Orwell's very ordinary 'hero' of Nineteen Eighty-four to whom self-knowledge has been forbidden. In Erewhon social deviancy and uncontrolled individualism are taken as a symptom of moral sickness. For all that, these 'straighteners' cannot wholly 'make strait' the Erewhonian mind, for if its logic often seems to us utterly, even perniciously illogical, Higgs does note offhandedly that 'they were very tolerant' (p.89) - at least of him. Moreover, certain minority opinions (such as those of 'the malcontents') are countenanced.

Thus, if Butler accords morality (as personified by the straightener) a degree of social importance, he makes it clear that these special practitioners of the vices and virtues also act as a

kind of external, formal conscience allowing the offender not only the chance to expiate his guilt, but indeed to devolve upon a professional moralist the responsibilty for ethical judgement. Consequently, personal morality is not merely secularised, it is clearly relativistic and devoid of any association with revealed divine wisdom or dicta. This treatment of morality as a relativistic phenomenon (not uncontroversial in a Victorian publication) is wholly in keeping with the larger theme discerned in Erewhon by Peter Mudford:

> In The Way of All Flesh Butler concentrates on the flaws and limitations in family relationships, especially as these are influenced by the command to 'honour thy father and mother'. In Erewhon it is attitudes, not relationships, that come under surveillance; and the range taken is wide. All reflect in their various ways the one common enemy: blind adherence to attitudes inculcated in childhood or handed down from past generations.
>
> 48.

Clearly Butler was acutely aware of what he had decided was the unacceptable burden of highly proscriptive traditional moral views and inadequate, even reactionary social values (concerning, for instance, the correction of criminals). As for 'straightening', the pragmatic Erewhonians accept it because they find it works, rather than because it is allegedly a product of more-than-human wisdom. While Butler's novel abounds with such provoking notions (especially concerning the Erewhonians' views on machines) the lampoon most germane to the discussion of the factitious creeds of science fiction is his highly original, satirical invention, the 'Musical Banks' of Erewhon. As J.C.Garrett has observed, the tone of Butler's narrative alters in this section:

> As author, Butler has delicious fun with Higg's efforts to convert Chowbok and with his hopes of finding the ten lost tribes of Israel across the ranges. But the Higgs who arrives in Erewhon, however earnest he may be in trying to

> persuade Arowhena of the truths of Christianity, is a different man when he comments on the early training of the managers of the Musical Banks (i.e. priests of religion). Higgs comments that '..they had the misfortune to have been betrayed into a false position at an age for the most part when their judgement was not matured, and after having been kept in studied ignorance of the real difficulties of the system'(p.117). This remark indicates a reflective experience unlikely in the narrator of the early chapters but it also sounds uncommonly like the son of Canon Butler, who could never suppress his bitter memories of Langar Rectory. 49.

Compounding the confusion of the inclination Butler has to speak directly - even sermonize - while Higgs is discarded to hang abandoned in the wings like a neglected puppet is the apparent disorder of what Butler advances as his own views. The unconventional nature of Butler's novel, however, is an effective vehicle for his unorthodox opinions. In view of Higgs's observation that the Erewhonians '...appeared to have little or no religious feeling, and to have never so much as heard of the divine institution of the Sabbath'; and ascribed Higgs's weekly observance as being a strange 'fit of sulkiness' (pp.88-89), Butler's treatment of his major religious theme may seem to have a degree of inconsistency. Of course this is deliberate, as one of Butler's main preoccupations is with the weakness of human logic: as represented by the prevailing attitudes of the Erewhonian 'Colleges of Unreason'(50), 'Reason' itself, the very touchstone of scientific positivism, is not beyond the scope of Butler's satire. Accepting for the moment Garrett's propositions concerning satire, there may in fact be little hard evidence in Erewhon itself to support his second conclusion:

> The inconsistencies mar the satire. To succeed, satire must assume a set of values by which either the present world or the "never-never-land" can be appraised. These values need not be explicit, but they must be there. No-one misunderstands the moral indignation lying behind Swift's ironic Argument against abolishing Christianity, for example. But it is hard to deduce a consistent set of values from

> Erewhon - and this is not merely because the authorial tone and attitude vary. It is hard, I suggest, for two reasons: first, the ironist in Butler never could control the Butler who was enchanted with ideas as playthings; second, Butler's attitude to society and its institutions was unclear to himself.
>
> 51.

This is Butler's own 'Erewhon' ("Nowhere") after all, where any absurd inversion, startling analogy or simple facetiousness may allow a fresh perspective of a time-honoured issue. That the second edition of the novel really was the third revision and presentation of these notions suggests compellingly that there is nothing merely fortuitous about the expository treatment of religion he offers, even if he has himself been unsettled by the inability to reconcile relativism and religion, as has also been proposed:

> To be really effective, satire must rest on a system of values; and irony must contain an implicit attitude. By approaching a subject from an unusual point of view Butler so bemuses his readers that they quite forget what Butler explicitly avows over and over again: that he is a relativist. Moreover, when Butler occasionally forgets his relativism, he inadvertently reveals an undercurrent of conservatism or conventionality. Thus his occasional admissions about religion preserve his anxiety to preserve it...
>
> 52.

Unmistakeably, the underlying problem confronting Butler is the same as is frequently apparent in the science fiction of his successors (not excepting H.G.Wells) who are repelled by the all-too-evident failings of the orthodox religions of the day, and yet, however sceptical and unorthodox, nonetheless remain essentially religious in their outlook. Indeed, such a perspective is the well-spring of a host of later writings whose authors are no less systematic than Butler, whose methods and argument anticipate those of the post-modernists of science fiction who may offer existentialism, comparative theology and phenomenology as rational where Butler had only his own sense of outrage and his determination to ridicule

Victorian Anglicanism - here by analogy, there by parody, and with scorn passim. Garrett's own prosaic view of satire rather undercuts his contentions about the inadequacies of Butler's satire(53).

Butler begins by establishing certain premises about the nature of orthodox or established religion which he then develops in his preferred syllogistic manner:

> So far...as I could collect anything certain, I gathered that they have two distinct currencies, each under the control of its own banks and mercantile code. One of these (the one with the Musical Banks) was supposed to be the system, and to give out the currency in which all monetary transactions should be carried on; and as far as I could see, all who wished to be considered respectable, kept a larger or smaller balance at these banks. On the other hand, if there is one thing I am more sure of than another, it is that the amount so kept had no direct commercial value in the outside world; I am sure that the managers and cashiers of the Musical Banks were not paid in their own currency.
>
> Erewhon, pp.137-138.

It becomes clear that obtaining credit (symbolised by the purchase of financially useless token coins) at the Musical Banks is essential for maintaining and increasing one's respectability:

> ...in the coinage of the Musical Banks he not only challenges the false consolations of religion based on the desire to appear respectable, but the symbolic value of money as a sacred cow whose hold over the feelings is powerful and corrupt. But Butler's satire here, as elsewhere, tempered by an acceptance of the important part played by luck in human affairs; this acts to restrain any absolute condemnation - and so by implication ought to encourage moderation or compassion.
>
> 54.

Higgs's first visit to a Musical Bank is at once overwhelming and bewildering, but we are well served by his customary curiosity. This approach also permits his author to dress his expository style most happily in the conventions of naturalism:

> I cannot describe all that took place in these inner precincts, for a sinister-looking person in a black gown came and made unpleasant gestures at me for peeping. I happened to have in my pocket one of the Musical Bank

> pieces, which had been given by Mrs.Nosnibor, so I tried to tip him with it; but having seen what it was, he became so angry that I had to give him a piece of the other kind of money to pacify him. When I had done this he became civil directly. As soon as he was gone I ventured to take a second look, and saw Zulora in the very act of giving a piece of paper which looked like a cheque to one of the cashiers. He did not examine it, but his hand into an antique coffer hard by, he pulled out a quantity of metal pieces apparently at random, and handed them over without counting them; neither did Zulora count them, but put them into her purse and went back to her seat after dropping a few pieces of the other coinage into an alms box that stood by the cashier's side.
>
> Erewhon, p.140

Having suggested the material uselessness of this 'currency' in the undisguised resentment of the Bank official who spurns Higgs's attempt at bribery, Butler emphasises it in various ways, most particularly when Higgs notes how everyone he has accompanied to the Bank gives the metal tokens back to a 'verger' before they leave, who restores them to the 'antique coffers' overseen by the 'cashiers'. The scriptural text behind this one-way transaction would seem to be St. Matthew's injunction against accumulating worldly-wealth at the expense of one's soul: 'Lay not up for yourselves treasures upon earth, where moth and rust doth corrupt, and where thieves break through and steal: but lay up for yourselves treasures in heaven' (Matt.6,19). Of course Butler's target is the hypocrisy of clerics who condemn materialism in the name of their various creeds but garner ecclesiastical power and personal wealth. The state religion of Erewhon is a device permitting Butler to castigate the English Establishment and Anglicanism, and though the fictional Mrs.Nosnibor echoes the contemporary concern about the declining number of its adherents, Higgs notes that 'She might say what she pleased, but her manner carried no conviction'.(p.142) As usual, Higgs contrives to speak to a senior figure who can expound the precepts of the

institution:

> In conversation with one of the Musical Bank managers I ventured to hint this [the decline of the Banks] as plainly as politeness would allow. He said that it had been more or less true till lately; but that now they had put fresh stained glass windows into all the banks in the country, and repaired the buildings, and enlarged organs; the presidents, moreover, had taken to riding in omnibuses and talking nicely to people in the streets, and to remembering the ages of their children, and giving them things when they were naughty, so that all would henceforth go smoothly.
> 'But haven't you done anything to the money itself?' said I, timidly.
> 'It is not necessary,' he rejoined; 'not in the least necessary, I assure you.'
> Erewhon, pp.142-143.

If Butler profanes orthodox religion by identifying it with greed, exploitation and hypocrisy, his convictions remain essentially religious - 'theistic'. Furthermore, however scathing Butler is about the Anglican Establishment, he never directly attacks religious faith itself, for the shortcomings of orthodox Christian morality are his constant target, especially when hypocritical faithlessness to one's espoused creed is involved. Yet underlying Butler's satiric indignation about pernicious religious principles and practice is a belief in man's capacity for moral growth and innate spirituality. In Erewhon and its sequel, his satires of factitious religion, he takes issue with any hegemony, technological or religious, which would vitiate these humane qualities; but his vision is deeply religious.

Of course the knowledge revealed to Mankind in scripture and in theophany - the foundation of religious faith - is assumed to have divine benevolence behind it, whereas few would place much faith in the notions of a power-hungry, ambitious scientist, or indeed, any mere mortal. Thus, the organisation of human curiosity, initiative, and that appetite for dominion endorsed by the economic pattern of Western life into the methodical, scientific pursuit of knowledge is

often represented as chancy if not utterly fatal and, in contrast to the more sanguine predictions of the positivists, it is frequently disastrous. The gloom of many devout authors, and some sceptics, is reinforced by the conviction that human judgement is altogether too weak to assure our general safety. These issues come to the fore in Philip K.Dick's excellent novel, Do Androids Dream of Electric Sheep? (1968)(55).

World War Terminus has turned the world into a waste with habitable pockets where 'the specials', those who cannot fulfill the requirements for emigration to new colony planets, must make the best of it. Anxious to preserve the race, the U.N. has decreed that only persons whose genetic patterns have not been deranged by radiation and the persistent fallout may be permitted to leave Earth, much of which is now poisoned and derelict. One of Dick's first targets is the political-military-industrial establishment which misled a superpower about the consequences of nuclear war:

> In a giant, empty, decaying building which had once housed thousands, a single TV set hawked its wares to an uninhabited room.
>
> This ownerless ruin had, before World War Terminus, been tended and maintained. Here had been the suburbs of San Francisco, a short ride by monorail rapid transit; the entire peninsula had chattered like a bird tree with life and opinions and complaints, and now the watchful owners had either died or migrated to a colony world. Mostly the former; it had been a costly war despite the valiant predictions of the Pentagon and its scientific vassal, the Rand Corporation - which had, in fact, existed not far from this spot. Like the apartment owners, the corporation had departed, evidently for good. No one missed it.
>
> Do Androids Dream, pp.16-17.

To help establish themselves in their alien surroundings each colonist is allocated an artificial helper, a humanoid robot or 'android'. These were first developed as a sort of expendable soldier

(the 'Synthetic Freedom Fighter', as Dick trenchantly calls the man-made helots), but had soon proliferated into many types because of the shortage of manpower after mankind's self-inflicted, indiscriminate pogrom:

> ..able to function on an alien world the humanoid robot - strictly speaking, the organic android - had become the mobile donkey engine of the colonization programme. Under U.N. law each emigrant automatically received possession of an android subtype of his choice, and by 1990, the variety of subtypes passed all understanding, in the manner of American automobiles of the 1960s.
>
> Ibid.

However, Dick's concerns have to do with life on Earth rather than on some exotic planet, and indeed with an ontological question which is quite fundamental: what is the aspect of consciousness which is uniquely human? This issue is dramatised in Do Androids Dream as a refined Frankensteinian problem - how can we distinguish between creator and creature when our artificial progeny are as perfect as we can make them?

> ...the Nexus-6 did have two trillion constituents plus a choice of within a range of ten million possible combinations of cerebral activity. In .45 of a second an android equipped with such a brain structure could assume any one of fourteen basic reaction-postures. Well, no intelligence test would trap such an andy. But then, intelligence tests hadn't trapped an andy in years, not since the primordial, crude varieties of the '70s.
>
> The Nexus-6 android types, Rick reflected, surpassed several classes of human specials in terms of intelligence. In other words, androids equipped with the new Nexus-6 brain unit had from a sort of rough, pragmatic, no-nonsense standpoint, evolved beyond a major - but inferior - segment of mankind. For better or worse. The servant had in some cases become more adroit than its master.
>
> Do Androids Dream, p.27.

For Rick Deckard, this is as much a pragmatic problem as a philosophical one, for he earns a living as a bounty hunter, 'retiring' renegade androids. His latest assignment is to trace and destroy a

number of the latest type, which have fled to Earth hoping to live out their short lives freely in one of the derelict areas people now avoid. Rick has no qualms about 'retiring' androids - who in any case usually try to kill him first - but his equanimity depends upon being confident that his quarry actually is an android and not a fellow human being, something which has, with this latest commercially developed type, become extremely difficult. The acid test involves measuring an individual's capacity for empathy - an uniquely human attribute - rather than intelligence. For their own quite commercial reasons, however, the corporation who produce Nexus-6 androids tries to discredit this last means of telling 'servant' from 'master' by requiring Rick to try out his test on Rachael Rosen. Although he later detects the truth and correctly identifies her as an android, she at first passes the test thanks to an elaborate cover story and her advanced design. Rick is in no doubt whatever as to what lies behind the technological refinements which have created the problem - corporate greed:

> 'This problem,' Rick said, 'stems from your method of operation, Mr.Rosen. Nobody forced your organization to evolve the production of humanoid robots to a point where -'
>
> 'We produced what the colonists wanted,' Eldon Rosen said. 'We followed the time-honoured principle underlying every commercial venture. If our firm hadn't made these progressively more human types, other firms in the field would have. We knew the risk we were taking when we developed the Nexus-6 brain unit. <u>But your Voigt-Kampff test was a failure before we released that type of android. If</u> you had failed to classify a Nexus-6 android as an android, if you had checked it out as human - but that's not what happened.' His voice had become hard and bitingly penetrating. 'Your police department - others as well - may have retired, very probably have retired, authentic humans with underdeveloped empathic ability, such as my innocent niece here. Your position, Mr.Deckard, is extremely bad morally. Ours isn't.'
>
> <u>Do Androids Dream</u>, p.45

Rosen's hypocrisy is later revealed, but while he has the advantage he

tries to shift the balance of moral opprobrium in his own favour. No corporate Frankenstein he, but merely a businessman whose activities are condoned, indeed encouraged by his society.

Decard duly hunts down and destroys the androids, but as he does so he becomes increasingly oppressed by his assignment. He realises that he has began to empathise with them, to perceive the situation from their point of view. To fight off this deepening mood, he invests in a real animal, a commodity increasingly at a premium in his wasted world. Consequently he must continue the android hunt, and kill the remaining three to pay for his expensive investment - a live goat. Yet while this means that he must carry out the rest of the assignment to pay for the goat, he remains demoralised by his growing doubts about the propriety of killing these almost-human creatures. In this fretful mood, he seeks reassurance from a communion with Mercer, the old universal scapegoat.

> On the screen the faint, old, robed figure of Mercer toiled upward, and all at once a rock sailed past him. Watching, Rick thought, My God; there's something worse about my situation than his. Mercer doesn't have to do anything alien to him. He suffers but at least he isn't required to violate his own identity.
>
> Bending, he gently removed his wife's fingers from the twin handles. He then himself took her place. For the first time in weeks. An impulse; he hadn't planned it; all at once it had happened.
>
> A landscape of weeds confronted him, a desolation. The air smelled of harsh blossoms; this was the desert, and there was no rain.
>
> A man stood before him, a sorrowful light in his weary, pain-drenched eyes.
>
> 'Mercer,' Rick said.
>
> Do Androids Dream, p.135

Mercerism is a factitious transcendental cult which uses the uniquely human faculty of empathy to create a fusion of consciousness with the suffering but indomitable figure of Wilbur Mercer. Communing with him, acolytes may share his mortification. It is a religious experience

which, in its twentieth-century, sceptical, post-modern despair, embodies a quite unsurpassable neo-Gothic sublimity.

> 'I am your friend,' the old man said. 'But you must go on as if I did not exist. Can you understand that? He spread empty hands.
> 'No.' Rick said. 'I can't understand that. I need help.'
> 'How can I save you,' the old man said, 'if I can't save myself?' He smiled. 'Don't you see? There is no salvation.'
>
> Ibid.

Mercer's counsel - fatalistic acceptance - is as devastatingly simple as it is inevitable:

> 'Then what's this for?' Rick demanded. 'What are you for?'
> 'To show you,' Wilbur Mercer said, 'that you aren't alone. I am here with you and always will be. Go and do your task, even though you know it's wrong.'
> 'Why?' Rick said. 'Why should I do it? I'll quit my job and emigrate.'
> The old man said, 'You will be required to do wrong no matter where you go. It's the basic condition of life, to be required to violate your own identity. At some time, every creature which lives must do so. It is the ultimate shadow, the defeat of creation; this is the curse at work, the curse that feeds on all life. Everywhere in the universe.'
>
> Ibid.

Once the prophet has personally told Rick that the sole purpose to life is to continue with it, his estrangement becomes worse until he himself becomes almost an alien in his own society. A primal existentialism prevails, though, and however reluctantly, Rick goes ahead with his task, and gets to retain the goat.

The texts discussed have shown how, even from the very beginnings of this modern genre, 'Progress' has often been associated with the hubristic intellectual pride of a self-regarding scientist and thence portrayed as a rather less than respectable or even potentially immoral objective. Nowadays materialistic and religionist notions of

humanism seem to diverge quite widely; gone is the closer relationship these ideas may have had in pre-industrial times (to be discussed at greater length in Chapter 4 with reference to A Canticle for Leibowitz, and in Chapter 6, to Pavane, among others). Indeed, the moral orientation of the humanist ideal has become quite controversial, and perhaps unexpectedly given popular expectations of the genre, it has come to be a preferred theme of some contemporary science fiction writers.

REFERENCES and FOOTNOTES

1. Algernon Charles SWINBURNE, 'Hymn of Man'.

2. Nelson BOND, 'The Cunning of the Beast', in Other Worlds, Other Gods, edited by Mayo MOHS; Doubleday & Co., New York, 1971. p.28.

3. Bond, ibid., p.25.

4. Michael BISHOP, 'The White Otters of Childhood', in Beneath the Shattered Moons; Sphere Books Ltd., London, 1978; pp.71-83 passim.

   Bishop's name for the scientist, Prendick, associates his story with H.G. WELLS'S The Island Of Doctor Moreau(1896), in which the earlier Prendick is the aghast narrator.

5. The text of Mary SHELLEY's Frankenstein I have used throughout is that edited by Mario PRAZ and Peter FAIRCLOUGH for Penguin Books Ltd., in Three Gothic Novels. (Harmondsworth, 1968.)

6. Francis BACON, The New Atlantis; reprinted in The Road to Science Fiction: from Gilgamesh to Wells, edited James GUNN; New English Library, London, 1977; p.74.

7. As Christopher SMALL's highly informative account shows, Frankenstein was recieved critically with 'enthusiasm and bewilderment' by the reviewer (possibly Sir Walter Scott) for Blackwood's Edinburgh Magazine; praised perceptively by the reviewer for the Gentlemen's Magazine; and received with 'outrage' by a reviewer for the studiedly polemical Quarterly Review.
   Ariel like a Harpy: Shelley, Mary and Frankenstein; V.Gollancz Ltd., London, 1972; pp.19-21.

8. D.W. HARDING, 'The Character of Literature from Blake to Byron,' in Vol.5 of The Pelican Guide to English Literature, edited by B.FORD; Penguin Books Ltd., Harmondsworth, 1957; p.74.

9. Christopher SMALL, op.cit. (see 7).
   Martin TROPP, Mary Shelley's Monster; Houghton Mifflin Co., Boston, 1977.
   Jane DUNN, Moon in Eclipse: A Life of Mary Shelley; Weidenfield and Nicolson, London, 1978.

10. In 'On the Origin of Species: Mary Shelley,' Chapter I of his Billion Year Spree: The History of Science Fiction; Weidenfield and Nicolson, London, 1973.

    In the Introduction to his revised and extended Trillion Year Spree(1986), Aldiss is able to reflect on the change which his earlier promotion of Frankenstein effected:

    > Before I wrote, almost no one paid any attention to that old pre-Victorian novel of Mary Shelley's. Having seen travesties of the theme on film and television, they believed

they knew what they did not. The situation has remarkably improved since then. Trillion Year Spree, p.18

He also declares, 'Bearing in mind that no genre is pure, Frankenstein is more than a merely convenient place at which to begin the story. ...Mary Shelley's novel betokens an inescapably new perception of man's capabilities..' Idem.

In Trillion Year Spree, Aldiss offers a deeper and even more sustained analysis of Frankenstein confirming much of the the discussion in my 'A Gothic Legacy and its Sources,' which was written some years before his fuller discussion went to press. However, many other elements of the present purview of the science fiction of aspiration retain their originality. Butler, for instance, whose work Erewhon is discussed by Aldiss in terms of a sustained critique on Darwinism, remains a neglected figure in most treatises - not earning a mention in Robert Reilly's anthology of studies of religion in science fiction, The Transcendent Adventure, for instance; and even Aldiss himself quite overlooks Butler's central concern with religious morality in Erewhon, a feature which is of no less importance in the sequel, Erewhon Revisited (see Chapter 6, 'From Man to Messiah,' of the present work).

11. Eric S. RABKIN and Robert SCHOLES, Science Fiction: History, Science, Vision; Oxford University Press, 1977; p.196.

12. Mark R. HILLEGAS, 'The Literary Background to Science Fiction,' in Science Fiction, A Critical Guide, edited Parrinder; Longman Group Ltd., London, 1979; p.11.

13. Patrick PARRINDER, 'Science Fiction and the Scientific World-View,' in Science Fiction, A Critical Guide, edited Parrinder; Longman Group Ltd., London, 1979; p.68.

This slip is not typical of Mr.Parrinder's valued contribution to the field of science fiction criticism, but it does show how widespread are some misconceptions about Mary Shelley's scientist. (See also 38 & 43, below.)

Commenting on Frankenstein's last words, Brian Aldiss dryly (and to better effect) observed, 'Some people never learn.'
(Billion Year Spree, p.33)

14. Kingsley Amis put this pithily:

"S.f.'s no good," they bellow till we're deaf.
"But this looks good. Well then, it's not s.f."

Brian Aldiss wrote of the problem of the lack of recognition of Frankenstein as being a particular example of the wider problem of the critical response to science fiction:

It is all too appropriate that Mary Shelley's should be neglected. Science fiction has been similarly neglected

until recently. As the standing of Mary Shelley's reputation is still in the balance, so is science fiction's.
Billion Year Spree, p.41.

However, Robert PLANK is quite forthright about the stature of science fiction:

> As "everybody" knows, science fiction is about rockets, bloody erotic adventures on distant stars, and galactic empires in the year 235,000. Everybody? We evidently have to except those who know what science fiction is really about. They are quite aware that something incomparably more important is at stake. Science fiction has become as indispensable for the embodiment of the great moral questions in literature as religion and mythology used to be.
> 'The Place of Evil in Science Fiction,'
> Extrapolation 14 (1973), p.100.

Robert L.WYMER's more measured evaluation also includes the argument that 'popular literature need not be inferior:'

> There will no doubt always be a market in SF for its more ephemeral manifestations, like adventures, escapes, puzzles, and scientific speculations, and certainly SF will remain in many ways a literature of ideas; indeed, it may even effectively extol the quest for knowledge as James Gunn does in The Listeners(1972). But instead of human beings existing to add drama to the exploration of science, technology, or the future, these latter elements have come to exist in a more sizable body of literature to heighten and expose a central concern with what it means to be a human being. What is especially delightful about this development is that in the process SF has grown from being a manifestation of the interests of a small coterie of specialized readers into a truly popular literature, and its growth in popularity has paralleled its growth in depth, sophistication, and understanding of the Western literary tradition. Science fiction reveals that popular literature need not be inferior, that it can function as the means by which a culture critically explores and creates its own values and consciousness.
> 'Perception and Value in Science Fiction,'
> Extrapolation 16 (1975) pp.103-112.

15. Dunn, op.cit., p.131. Incidentally, this explodes the notion that galvanic experiments upon a Glasgow convict which allegedly ended with the revivification of the executed murderer were in some way the inspiration for Frankenstein. It is not really clear from the title 'Frankenstein was a Glasgow Man' whether broadcaster Edward CHRISHALL means Dr. Jeffray, the university experimenter who is reputed to have succeeded in re-animating Matthew Clydesdale, or Clydesdale himself; but the footnote in The Glaswegian, 7 (May 1987), which mentions Mary Shelley's visit to the city suggests that her novel, 'published in 1818,' is in some obvious way

related to this amazing event - which must have taken place some time after Clydesdale's trial 'In the bleak October days of 1818.' Stories like this no doubt abound; indeed, in a recent television programme viewers were shown around the ancestral seat of the Frankensteins, a rather picturesque, semi-ruinous German castle. All this bespeaks the strength of a modern myth which is now so pervasive and ill-defined that it can even support its own body of apocryphal tales and lore!

16. Christopher Small provides an illuminating discussion (op.cit., pp.48-52) of the myth of Prometheus plasticator, a variation of the ancient Greek myth of the fire-stealing Titan, Prometheus. He is certainly correct in his insistence upon seeing Mary's scientist Victor Frankenstein as a contemporary emblem of the former promethean figure, but in linking Frankenstein's hubristic pursuit to the potent, promising force of science, she gave a gave a crucial new currency to the popular image of the scientist and the technologist as the audacious, aspiring depredator of jealously-guarded divine secrets which can be of immense practical value to a progressive society. This may in some way explain why the original Greek myth (the basis of Prometheus Bound, Aeschylus's fifth-century B.C. drama) has come to overshadow that of Prometheus plasticator as a symbolic depiction of twentieth-century scientific endeavour, particularly in the nuclear age when it seemed so apt to see atomic research in promethean terms - scientists were daringly "meddling with the very fabric of creation" and "unleashing fire stolen from the gods", as it were.

17. Baird SEARLES et al., A Reader's Guide to Science Fiction; 'The Spawn of Frankenstein'; Avon Books, New York, 1979; p.246.

18. James GUNN, The Road to Science Fiction, Vol.I; New American Library, New York, 1977; p.163; an otherwise excellent work.

19. Aldiss puts this rather well: "Symbolically, Frankenstein turns away from alchemy and the past towards science and the future..." (Billion Year Spree,p.27).

20. Harry LEVIN, Christopher Marlowe, The Overreacher; Faber & Faber, London, 1954; p.130.
Christopher SMALL makes a similar distinction between magic and science:

> The life of pre-scientific nature, the nature of animism, is free, as anything with a soul is free, a rock as much as a beast or another man, to be controlled if at all by magic, which is most uncertain. (For magic, even though it be the precursor of science, and even called 'science' by its practitioners, operates in a quite different way, not simply in being ineffective, but in its assumptions. It is at bottom a work of the emotions... The sorcerer... may be "reasonably" certain that autonomous nature will obey him....but he cannot be as sure as a scientist.
> op.cit.,p.256.

21. I have used the translation of Goethe's 'Prometheus' given in Vol.III of Specimens of Foreign Literature, edited by George Ripley for Hilliard, Gray and Co., Boston, 1839; pp.106-108.

22. As Small observes, 'The spirit of the age may include certain images: the idea of Prometheus was in the air.' (op.cit.,p.52) Goethe's version is unmistakeably Prometheus plasticator, and since Percy Shelley had even essayed a poem similarly titled 'Prometheus' while staying at the Villa Diodati (Small, op. cit., p.53) where Mary began writing, it is entirely feasible that Frankenstein's reckless hubris was partly inspired by that of Goethe's sardonic man-maker.

23. The following development of this line of argument is largely my own conjecture; I can find no source of authority dealing with the extent to which Frankenstein was influenced by Goethe's Faust:Part One other than two rather suggestive but unclear observations by Brian Aldiss:

> As Mary was commencing her novel, Byron was exiling himself from England forever. He stayed at the Villa Diodati.... The Shelley party was near by. "Monk" Lewis also appeared, and read Byron Goethe's Faust, translating from the German as he went - thus sowing the seeds of Byron's Manfred. As the Shelleys probably introduced Byron to Darwin's ideas about evolution and the future, he introduced them to the Prometheus Vinctus of Aeschylus. Billion Year Spree, p.28

and:

> Although Frankenstein is a Gothic novel, and its predecessors are apparent in the text - an honourable array of godfathers they make, Paradise Lost, Goethe's Faust, and Godwin's Caleb Williams among them - fresh elements mark its departure from old pathways.
> Science Fiction as Science Fiction, p.19
> (Bran's Head Books, Frome, Somerset; 1978.)

Surprisingly, Aldiss dropped the association with Goethe from his rewritten version, Trillion Year Spree(p.46). While keeping the other wording of this short passage more or less intact, Aldiss quietly forgot about his (perhaps speculative) introduction of "Monk" Lewis into the Villa Diodati circle, and the latter's supposed influence on Byron. Other evidence suggests that Aldiss's earlier intuition may have been correct after all.

Christopher Small seems to tie Percy Shelley's knowledge of Faust:Part One to 1821-22(op.cit.,p.284), but elsewhere he also notes that Shelley's reading of Gothe's drama, as recorded in Shelley's letters, was 'after the composition of at any rate the main part of Prometheus Unbound,' (i.e., after 1819-20) and while he thinks it feasible that both Shelley and Mary knew of Goethe's work before she began writing Frankenstein, he is more cautious

than Aldiss in seeing Goethe as an important influence, though in a footnote (Chapter 6, 14, p.336) he includes the nickname Shelley had in Italy ("the Snake") as 'supposedly referring to Goethe's Faust'. There is evidence from another source that Shelley had had some familiarity with Goethe's play while at Diodati in 1816:

> Byron also received some assistance from Shelley in his efforts to gain a more intimate knowledge of Faust. It was during one of his viva voce translations that an incident occurred which gained for Shelley the nickname of 'The Snake'. E.J. Trelawney relates:
>
> > As Shelley translated and repeated passages of Faust - to, as he said, impregnate Byron's brain - when he came to that passage, 'My Aunt, the renowned Snake', Byron said, 'Then you are her nephew' and henceforth he often called Shelley the Snake...
> >
> > James BOYD, Goethe's Knowledge of English Literature; Oxford Univ. Press, 1936; p.162.

24. Faust:Part One, Johann Wolfgang von Goethe; translated by Philip Wayne for Penguin Books Ltd., Harmondsworth, 1949; pp.98-99.

25. P.B.MEDAWAR, Advice to a Young Scientist; Harper & Row, New York, 1979; p.70.

26. Francis BACON, The New Atlantis; Gunn, op.cit., p.76.

27. Frederick L. JONES, (ed.) Mary Shelley's Journal; Univ. of Oklahoma Press, 1947. Her reading lists show that in 1815 both she and Shelley read parts of The Faerie Queene; in 1816 she re-read Paradise Lost (she had read The Sorrows of Werter in 1815, probably in an edition of Richard Grave's translation from French, of which there were five impressions between 1779 and 1785, with a further seven impressions of another translation between 1786 and 1809). For 1815, see Jones p.47; for 1816, see Jones p.73.

28. Betty T. BENNETT, (ed.) The Letters of Mary Wollstonecraft Shelley, Vol.I; John Hopkins Univ. Press, London, 1980; p.22.

29. Tropp, op.cit., p.57.

30. Levin, op.cit., p.136

31. Levin, idem., pp.141-142.

32. B. Ifor EVANS, Literature and Science; Allen & Unwin, London, 1954; p.11.

33. Joel PORTE, 'In the Hands of an Angry God: Religious Terror in Gothic Fiction'; in The Gothic Imagination: Essays in Dark Romanticism, edited by G.R. THOMPSON; Washington State Univ. Press, 1974; p.43.

Still on the "sublime", Aldiss notes:

Burke distinguished between beauty, which is founded on pleasure and is placid, and the sublime, which inspires awe and terror and, with pain as its basis, disturbs the emotions. Billion Year Spree, p.17.

34. Plank, op.cit.:

> Absolute evil used to be concretized in but one person: the Devil. He has fallen on evil days. In Dante and Milton he still was grand. In Goethe's Faust he is rather a comical figure. In The Brothers Karamazov and in Mann's Doctor Faustus, it is only the deranged that can even perceive him. Exit Devil. Enter science fiction.
> 'The Place of Evil in Science Fiction.'

Aldiss supports the implications of Plank's argument in his much-revised and extended study of Frankenstein in Trillion Year Spree(1986):

> What exactly is uniquely innovative about Frankenstein? Interest has always centred on the creation of a nameless monster. This is the core of the novel, an experiment that goes wrong - a prescription to be repeated later, more sensationally, in Amazing Stories and elsewhere. Frankenstein's is the Faustian dream of unlimited power, but Frankenstein makes no pact with the devil. "The devil" belongs to a relegated system of belief. Frankenstein's pursuits bear fruit only when he throws away his old reference books from a pre-scientific age and gets down to some research in the laboratory. This is now accepted practice, of course. But what is now accepted practice was, in 1818, a startling perception, a small revolution.
>
> The novel dramatizes the difference between the old and the new, between an age when things went by rote and one where everything was suddenly called into question.
>
> Jiggery-pokery magic, of which Wells was to speak so contemptuously, achieves nothing in this new age.
> Trillion Year Spree, pp.39-40.

If '"The devil" belongs to a relegated system of belief,' the same cannot quite be said of God, for though Frankenstein aspires to wield divine power and be the focus of the adoration of a new race he would create, he himself has innate weaknesses (for instance, the spontaneous revulsion which blinds him to all but the outward appearance of the creature he endows with life) which make it impossible for him to fulfil his desires. Even if represented only as no more than a most remote influence rather than as a Providential force actively determining Frankenstein's fate, his creator (an 'absentee landlord,' according to Aldiss), persists into the new scientific era in some form, as does the moral confusion which has always been the hubrist's nemesis.

35. J.O. BAILEY, Pilgrims Through Space and Time; Argus Books, New York, 1947; p.29.

36. Tropp, op.cit., p.37.

37. Tropp, ibid., p.46.

38. Indeed, so close are these resemblances of one to the other that Messrs. Scholes and Rabkin (op.cit.) appear to wrongly attribute a remark of Walton to Frankenstein, thereby confounding the entire sense of the novel with respect to Frankenstein's role as a personified warning to the naive Walton:

> Victor, like Robert, will seek knowledge at any cost. When he first tries to justify his behaviour, Victor says, 'One man's life were but a small price to pay for the acquirement of the knowledge which I sought.'
>
> Science Fiction: History, Science, Vision, p.195.

However, they do observe that, 'Both Victor and Robert are Faust figures'; and furthermore, they correctly note that, 'Victor's last words before he dies begin as advice to Robert, but end quite differently...'(p.195) a point misinterpreted by Parrinder.

39. Levin, op.cit., p.140.

40. Levin, op.cit., pp.133-134.

41. Alfred Bester's 'Fondly Fahrenheit'(1954) (in which an artificial man (an "android") becomes infected with its master's pschyopathy); and Walter M.Miller's 'I Made You'(1954) (in which a cybernetic lunar fortress attacks the technicians who built it), are stories which illustrate two rather different approaches to this theme.

42. Perhaps the most well-known author of robot stories, Isaac Asimov, took this notion to a conclusion of sorts by inventing a code of conduct for the robots of his stories, the "Three Laws of Robotics", designed to prevent man's artificial creatures in any way harming a human being.

43. In Bond's story, the "beasts" are of course the heroes, their "otherness" from their creator a pseudo-ironic vindication of their human attributes. This is however a relatively rare use of the theme of alienation and hubristic menace; much more common is the sort of "beastly otherness" exemplified by this sort of treatment:

> The creature crept. It whimpered from fear and pain, a thin, slobbering sound horrible to hear. Shapeless, formless thing yet changing shape and form with every jerky movement.
>
> It crept along the corridor of the space freighter, fighting the terrible urge of its elements to take the shape of its surroundings. A gray blob of disintegrating stuff, it crept, it cascaded, it rolled, flowed, dissolved, every movement an agony of struggle against the abnormal need to become a stable shape.
>
> A.E. van Vogt, 'Vault of the Beast'(1940).

Van Vogt's story neatly, if unwittingly, demonstrates yet again the general confusion over Victor Frankenstein. In this case, the names of the creator and "beastly" creation have become quite transposed:

> 'But why did you do it? Why?' (asks the human hero)
> 'Because they were hurting me. They were going to destroy me. Because...I liked...being human. I was...somebody!' (replies the beast)
> The flesh dissolved. It flowed slowly into a pool of lavalike gray. The lava crinkled, split into dry, brittle pieces.
> .....
> 'Poor Frankenstein.' (the hero concludes)

While resisting the temptation to slate the quality and style of 'The Vault of the Beast,' it is fair comment to observe that sadly it is representative of perhaps too much of the fiction which won an enthusiastic readership via the pulp magazines of the 1940's and 1950's.

44. Roger ZELAZNY, 'A Rose for Ecclesiastes;' from The Doors of his Face, The Lamps of his Mouth; Corgi Books, London, 1975; p.130.

45. Samuel BUTLER, Erewhon, p.39. All references to Erewhon are to the Penguin Books edition of 1970, introduced by Peter MUDFORD.

46. Robert SCHOLES and Eric S.RABKIN, Science Fiction: History, Science, Vision; Oxford Univ.Press, New York, 1977; pp.131-132.

47. MUDFORD, loc.cit., p.8.

48. MUDFORD, p.13;
Mudford also provides the following concise account of the new school of intellectual scepticism which emerged during the nineteenth century, confirming the influence this had on what Butler wrote.

> The influence of sceptical inquiry on theology had been complemented by the advances of scientific knowledge, especially in geology. In 1797 James Hutton had asserted the apparently limitless age of the earth against the traditional teaching of the Church that it only dated back to 4004 B.C. Sir James Lyell, in his Principles of Geology, published thirty years later, had adduced massive evidence for the earth's evolution over countless millennia. To this the Origin had added the evidence for organic evolution, and a theory as to the means by which it had ocurred. At the same time it finally established the supremacy of scientific fact over ecclesiastical assertion in matters where the Church had previously claimed to preach the absolute truth.

The appearance of the Origin at a time when Biblical criticism was making inroads on traditional doctrine gave a special kind of authority to sceptical inquiry at this time, which is reflected in the intellectual tenor of Butler's book.

Loc.cit., pp.14-15.

49. J.C.GARRETT, Hope or Disillusion - Three Versions of Utopia: Nathaniel Hawthorne, Samuel Butler, George Orwell; Univ. of Canterbury Publications Committee, 1984; pp.22-23.

50. The professors' view of reason itself is as fair an example as any of Butler's paradoxical wit, which departs from a sensible premise, usually cavorts through a syllogism or two, and ends by contriving a satirically inverted reflection of the first principle.

> Life, they urge, would be intolerable if men were to be guided in all they did by reason and reason only. Reason betrays men into the drawing of hard and fast lines, and to the defining by language - language being like the sun, which rears and then scorches. Extremes alone are logical, but they are always absurd; the mean is illogical, but an illogical mean is better than the sheer absurdity of an extreme. There are no follies and no unreasonablenesses so great as those which can be so irrefragibly defended by reason itself, and there is hardly an error into which men may not easily be led if they base their conduct upon reason only.
>
> Erewhon, p.187.

Modern anti-utopian fiction certainly affords abundant instances of 'men being led into error by basing their conduct upon reason only.' Materialistic rationalism (as has also been suggested elsewhere in this thesis) is ideal for fostering social conformity and the expeditious ethics of the totalitarian state. Astutely, Butler even anticipates two of the fundamental principles of Orwell's dreadful Ingsoc, 'doublethink' and 'the Mutability of the Past':

> 'It is not our business,' he said, 'to help students to think for themselves. Surely this is the very last thing which one who wishes them well should encourage them to do. Our duty is to ensure that they shall think as we do, or at any rate, as we hold it expedient to say we do.' In some respects, however, he was thought to hold somewhat radical opinions, for he was President of the Society for the Suppression of Useless Knowledge, and for the Completer Obliteration of the Past.
>
> p.190.

51. Garrett, op.cit., p.25.

52. Garrett, idem., pp.28-29.

53. It is unwise to be too prescriptive about literary conventions in discussing a work like Butler's; indeed, one wonders what Garrett, using similarly narrow criteria, might make of Vonnegut's Cat's Cradle (a devastatingly effective satirical novel), in which W.John LEVERENCE has discerned no less than '...sixteen traditional aspects of American Humor' including 'the tall tale, the unreliable narrator, the Negro minstrel, comedy in a grim situation, grotesque naturalism...' and so on.
Leverence, 'Cat's Cradle and Traditional American Humor'; Journal of Popular Culture, Vol.5(1972).

54. Mudford, op.cit., p.17.

55. Philip K.DICK, Do Androids Dream of Electric Sheep?; Panther Books, London, 1972.

Dick's story was recently released in an impressive film production as Bladerunner.

CHAPTER THREE

Rationalism and Hubris: Some Science Fictional Views of 'Progress'

Whether or not one sees the Icaromenippus of Lucian(1) or Frankenstein as 'the first science fiction novel' is in the end of limited importance if the influence of Mary Shelley's novel on later popular science fiction is recognised for what it is. The transference of horror and dread from necromancy to contemporary science was one of the most significant and lasting achievements of its authoress, as J.O.Bailey noted delightedly:

> These 'Gothic' themes have somewhat deepened the emotional possibilities of scientific fiction; the use of science has, in return, strengthened the basis of the tale of terror. The streams merge. Alph the sacred river, bound for a sunless sea, is diverted to a wider ocean. Ghosts, elixirs and mesmerisms lose their thrill, but there is ample material for the tale of terror in the theory of evolution and the atomic bomb.
>
> 2.

Furthermore, she anticipated a new variety of fiction which would take as its subject-matter the promise, and the threat, of change in a modern world more and more appreciative of the benefits, generally speaking, rather than costs of science-inspired technology.

> These elements - the new developments in biological science and the invention of the Gothic novel - combined with discoveries in electricity, particularly the creation of an electric current by Alexander Volta, came together in the imagination of an eighteen-year-old woman to produce what was, if not the first science fiction novel, at least the first novel that showed what a science fiction novel would be. That novel was Mary Shelley's Frankenstein(1818).
>
> 3.

The following discussion of a number of well-known novels, aimed at exploring the question of how rationalism and scientific materialism came to represent a crucial aspect of 'Progress', will permit a close examination of a range of the attitudes towards religion, morality

and science which emerge in science fiction.(4) While in isolation these may seem to be simply the expression of an individual author's perspective, they centre on the promethean ideal and hence share a conceptual complex without parallel in popular fiction. Moreover this aggregation of theme, argument and ideology is a rich provenance for the didactic work discussed in Chapter 5 whose writers deal with the ideals of progressive humanism far less sympathetically.

In the early texts discussed here an obvious Gothic element is linked to a quest for applicable knowledge, reflecting contemporary interest in technological innovation for personal, economic and political power and the emergent materialistic perspectives of the early twentieth century. In several later texts an important new humanistic apostasy is seen - subversion of the technocrat, the surrogate god of dystopian fiction. This dissident theme, where hubris becomes political rebellion, constitutes an important expression of humanist disaffection with technology.

The early development of the Gothic legacy and an emergent generic distinction between rationalism and reasonableness (i.e., materialism advancing 'natural justice' and 'common decency' as humane ethics in preference to utilitarian values or positivistic zeal) are the focus of the opening discussion below. Where a factitious religion is described in a text it is also reviewed en passant. However since there are few early examples extended discussion of the more elaborate satires must be deferred.

Objectifying the Sublime: Gothic Fiction and Scientific Principles.

The science fiction of Edgar Allan Poe(1808-49) is here and there quite clearly indebted to Mary Shelley's novel, but he did

refine the presentation of her conjunction of science and dread by a fuller, more structured adaptation of the logic and objectivity of the scientific method. Whereas Frankenstein was an individual so obsessed by the power he sought through science that eventually he utterly lost his composure if not his mind, Poe's scientists observe the most horrifying phenomena with more convincingly portrayed scientific detachment, even though they often seem scarcely less profane in their persistent onslaught against the fastnesses of the ultimate questions about existence and death.

In stories such as 'The Facts in the Case of M.Valdemar'(1845), (5) he utilises scientific methodology and data in presenting in a coherent and plausible way the unusual phenomena which underlie many of his stories: 'Poe's biological details are good, his manner cool and clinical. He regarded mesmerism as a strange but legitimate new science.'(6) He also exploits the outward calmness of his scientists to draw upon another dimension of horror for his story, by juxtaposing the extreme phenomena described with the coolly logical, 'objective' stance of the narrator:

> After pressing Valdemar's hand, I took these gentlemen aside, and obtained from them a minute account of the patient's condition. The left lung ...was entirely useless for all purposes of vitality. The right, in its upper portion, was also partially, if not thoroughly, ossified, while the lower region was merely a mass of purulent tubercles, running into one another. Several extensive perforations existed, and, at one point, permanent adhesion to the ribs had taken place.... It was the opinion of both physicians that M.Valdemar would die about midnight on the morrow (Sunday). It was then about seven o'clock on Saturday evening.
>
> 'The Facts in the Case of M.Valdemar,' pp.116-117

The story concerns an investigation of the nature of death to discover whether or not the animal principle of human life can be hypnotically compelled to reside in the body after the intellective

faculties have deteriorated. The title reflects the narrator's promise of a true account which will set the record straight about an intriguing event recorded with the dispassionate thoroughness of the professional scientist:

> Mr.L_____l was so kind as to accede to my desire that he would take notes of all that occurred; and it is from his memoranda that what I now have to relate is, for the most part, either condensed or copied verbatim.
> 'The Facts in the Case of M.Valdemar,' p.117

M.Valdemar is to be the subject in a morbidly Gothic experiment which nonetheless has been contrived not merely to observe, but to interrogate Nature. However 'objective' their manner, they (and Poe's reader) will feel disappointed if nothing extraordinary happens; this is not that sort of modern 'Galilean' (after Galileo) science in which the negative result is, properly construed, as revealing as an affirmative outcome. The scientists Poe depicts here are of course out to prove something which they anticipate more in a spirit of curiosity than of reason - for all their apparent professionalism, his Aristotelian scientists are asking leading, rather than open questions:

> Joseph Glanvill, in common with many of his contemporary Fellows of the Royal Society, had the utmost contempt for Aristotle, whose teachings he regarded as major impediments to the advancement of learning. In Plus Ultra he wrote of such experiments thus: 'Aristotle...did not use and imploy experiments for the erecting of his Theories: but having abritrarily pitch'd his Theories, his manner was to force Experience to suffragate, and yield countenance to his precarious Propositions.'
> 7.

So the anonymous mesmerist who acts as narrator, and his colleagues, may not be wholly convincing as scientists, but their professionalism and methodical manner do preserve them from the charge of being simply morbid voyeurs. Though the conduct of their investigation is quite evidently rationalistic, Poe uses science in the familiar

Gothic way, that is, to ensure the effectiveness of his fiction as horror fiction by giving his reader a retrospective 'verbatim' account of the sensational outcome to a pragmatic (Baconian) test of a (Kantian) metaphysical problem. The conclusion of his story is as devoid as the rest of any discernible moral perspective, and is where the science at last gives way completely to the Gothic when Valdemar, suspended for seven months between life and death, finally dies:

> For what really occurred, however, it is quite impossible that any human being could have been prepared. As I rapidly made the mesmeric passes, amid ejaculations of 'dead! dead!' absolutely bursting from the tongue and not the lips of the sufferer, his whole frame at once - within the space of a single minute, or even less, shrunk - crumbled, absolutely rotted away beneath my hands. Upon the bed, before that whole company, there lay a nearly liquid mass of loathsome - of detestable putridity.
>
> 'The Facts in the Case of M.Valdemar', p.123

Like young Victor Frankenstein, Poe's scientists see their squeamishness as being the only thing which might limit their noble pursuit of knowledge; their sole ethic is scientific, and if they are outwardly less excitable, they are just as visionary as their Gothic predecessor. Yet unlike both Frankenstein and Faustus, their questions about human existence are ontological, that is, about the nature of existence rather than teleological, that is, having to do with the purpose of existence, which is rarely if ever explored in Poe's science fiction. Unlike their forerunners, Poe's scientists seek to push back the limits of understanding and the horizons of their existence, but do not aspire blasphemously to usurp God.

However, in other stories - as H.Bruce Franklin has observed(8) - the scientific components of the fiction provide a reasoned predictive framework for the story, as in 'Mellonta Tauta'(1849), a short story of balloon travel set in 2848 A.D. Poe waggishly extols the

wonders of the age: twelve-line railways with three-hundred miles per hour trains, and so on. These 'wonders' are quite clearly meant to be seen as extrapolations or projections into the future of existing devices, as Poe himself makes plain by having his narrator refer disparagingly to their nineteenth-century precursors:

> Pundit says that the route for the great Kanadaw railroad road must have been in some measure marked out about nine hundred years ago! In fact, he goes so far as to assert that actual traces of a road are still discernible....The track, it appears, was double only; ours, you know, has twelve paths...
>
> The ancient rails were very slight, and placed so closely together as to be, according to modern notions, quite frivolous, if not dangerous in the extreme.
>
> 'Mellonta Tauta', p.131; 9.

Yet Poe the eclectic visionary, hoaxer and satirist, deplored the rigorous, deliberate, seemingly quite uninspired 'merely scientific men' of his age and also seemingly refused to see much merit in technological developments:

> But it was not science he hated so much as the triumph of mechanical reason, confirmed by technical progress. In 'The Colloquy of Monos and Una' Monos denounces 'the harsh mathematical reason of the schools,' sweeping aside the 'rectangular obscenities' with which technology has littered our globe. Poe used speculative theory from the start to frustrate technological methods and aims. Each 'advance in practical science' meant a 'retro-gradation in the true utility.' 10.

Poe was a chameleon, fanciful and wittily deceptive in much of what he wrote. He dared to be creatively inconsistent, preferring here to be quite strictly logical in his fiction, and there to strike a pose as a manic literary and philosophical jackdaw whose idiosyncratic and dazzling sensibility matched poetic absolutes with pure mathematics. As Kant had, Poe sought to form a synthetic, holistic theorem of the nature of existence and of perception. The literary results were, as the mood or whim took him, either overwhelming, visionary narratives such as 'Descent into the Maelstrom' and 'The

Power of Words'; or odd concoctions like 'Mellonta Tauta'(11). Thus it is quite ironic that it is for his use of extrapolation as a fictional device that Poe is most often seen as having made a notable contribution to the genre:

> Science fiction as a form of physical (as opposed from utopian, moral, psychological or religious) speculation is what Poe may have provided with significant new dimensions, though by no means giving it birth.
> 12.

The relationship between science and fiction in the 'scientific romances' of H.G.Wells (1866-1946) is often thought to be more straightforward than that of Poe's science fiction; V.S.Pritchett wrote in 1946 that during the century and a half which passed between Swift and Wells no other English novelist had gone to 'science for his data and materials as Wells has done'. The influence of science on English fiction before Wells was 'philosophical, not factual' (13), and there is certainly some clear evidence of the philosophical influences to be found in the utopian fiction of the later nineteenth century which will be discussed shortly.

As his care in keeping the scientific elements of his writing consistent and self-explanatory shows(14), his fiction is crafted rather than casual. Evidently he did not favour dilatory narratives, at least between 1894-1901 when he was writing his early science fiction. Even in his first published novel, The Time Machine, Wells reveals a gift for choosing the telling detail and voicing the chilling phrase. Moreover, he draws upon exciting, recent contemporary scientific influences which lend new force to the extrapolative, Gothic science fiction of Poe's mid-century era - practical, exciting discoveries about electricity, medicine and organic chemistry, and the evolutionary speculations of Charles Darwin(15).

Few would deny that his influence on twentieth century science fiction has been profound(16), but there has been some debate about the moral vision and ethical sensibility which helped shape and give depth to his work. Pritchett again:

> Wells the Utopian, Kipling the patriot - they represent the day-dreams of the lower middle class which will either turn to socialism or to fascism. Opposed in tendency, they both have the vision of artists; they foresee the conditions of our time. They both foretell the violence with a certain appetite. Crudity appeals to them. They are indifferent or bad-hearted, in human relations. They understand only personal independence which, from time to time in their work, is swallowed up in mass relationships. 17.

Since Pritchett also wrote of The Island of Doctor Moreau as 'a superb piece of storytelling'(18) it is reasonable to deduce that the crudity of which he writes above is one of sensibility rather than of literary style. Perhaps Wells would have agreed - in 1933 he called the same novel 'an exercise in youthful blasphemy' (19).

The Island of Doctor Moreau(1896) was the second of Wells's scientific romances, and it was the third novel he published. In his first, The Time Machine, he took a nineteenth-century man into the far future, extrapolating the later society from his contemporary viewpoint much as Poe did in 'Mellonta Tauta'. Since The Time Machine will be discussed in another context later, we merely note in passing here that it is significant that his first two novels deal with social projection in one case, and vivisection - of a distinctly hubristic kind - in the other.

Wells chose a time-honoured way of introducing the ghastly subject of The Island of Doctor Moreau. Prendick, the narrator whose signature appears at the end of his story as if to attest its veracity, has come home from a remote island where Doctor Moreau has for years been conducting grisly investigations, and the story is a

verbatim account of his experiences. He begins with his outward voyage, relating how he becomes caught up in Moreau's endeavours.

Rescued from a boat adrift on the high seas after shipwreck, Prendick learns that he owes his life to Montgomery, an expatriate former medical student who now assists Doctor Moreau. Prendick is himself quickly established by Wells also to have a casual scientific interest:

> I told him my name, Edward Prendick, and how I had taken to natural history as a relief from the dullness of my comfortable independence. He seemed interested in this.
>
> The Island of Doctor Moreau, chap.6; 20

Since the captain of the vessel associates Prendick with Montgomery and his disturbing cargo, he is put ashore with them at the nameless island where Moreau runs what he calls his 'biological station'. At their first meeting, the secretive Moreau seems relieved to learn from Prendick that he has a scientific background: 'I told him I spent some years at the Royal College of Science, and had done some research in biology under Huxley.'(Chap.6) While Moreau is unwilling to take Prendick into his confidence so quickly - 'Our little establishment contains a secret or so, is a kind of Bluebeard's Chamber, in fact. Nothing very dreadful really - to a sane man.'(Chap.7); Prendick suddenly remembers a vivisectionist scandal which had, a decade before, obliged a Doctor Moreau to abandon his 'valuable work' in England and go abroad:

> I followed him out with my eyes, and as I did so, by some trick of unconscious cerebration, there came surging into my head the phrase...'The Moreau Horrors.' The phrase drifted loose in my mind for a moment, and then I saw it in red lettering on a little buff-coloured pamphlet, that to read made one shiver and creep. Then I remembered distinctly all about it. That long-forgotten pamphlet came back with startling vividness to my mind. I had been a mere lad then, and Moreau was, I suppose, about fifty; a prominent and masterful physiologist, well known in

> scientific circles for his extraordinary imagination and his brutal directness in discussion. Was this the same Moreau? He had published some very astonishing facts in connection with the transfusion of blood, and, in addition, was known to be doing valuable work on morbid growths. Then suddenly his career was closed. He had to leave England. A journalist had obtained access to his laboratory...and by the help of a shocking accident... his gruesome pamphlet became notorious. On the day of its publication, a wretched dog, flayed and otherwise mutilated, escaped from Moreau's house.
>
> Chapter 7.

In Chapter 7, Prendick takes on another role. No longer a merely passive spectator caught up unwillingly in something about which he is denied the truth, he emerges as Wells's moral witness. At first Prendick's thoughts reveal uncertainty about Moreau: while he clearly dislikes the scandal which ruined the doctor, he also feels an unvoiced, subconscious objection to the cruelty of Moreau's experiments (with the 'wretched','mutilated','flayed' dog in mind, he can't help but think of the whole affair as 'shocking' - as his middle-class sensibility requires). Wells casts Prendick as another scientist not simply because he can thus be a knowledgeable reporter, but also because Wells needs to have another scientist condemn Moreau's experiments so that the final verdict passed on them is professional, and free of the charge of ignorant prejudice which might attend the response of a lay observer. Though puzzled and increasingly suspicious, Prendick conscientiously displays the proper scientific attitude: 'Yet surely, and especially to another scientific man, there was nothing so horrible as to account for this secrecy.'(Chap.7) So Moreau seemingly is to be tried by a peer, and he has implicitly ventured what is left of his professional reputation on whether or not Prendick is 'sane' - 'Nothing very dreadful really - to a sane man.' Still, rationality and sanity are not always congruent qualities.

The nature of the microcosm into which Prendick has been brought with his middle-class scientific sensibility is revealed only gradually to him as Wells exploits the situation he has established for maximum effect by introducing hints of Gothic darkness which Prendick notices piecemeal. At night there are the appalling screams of tortured animals, and by day he begins to see more and more evidence of physical peculiarities and strange disfigurements among the island's other inhabitants. Seeing a group from the distance as he explores the island alone, Prendick records his impressions of them thus:

> One was obviously a female. The other two were men. They were naked, save for swathings of scarlet cloth about the middles, and their skins were of a dull pinkish drab colour, such as I had seen in no savages before. They had fat heavy chinless faces, retreating foreheads, and a scant bristly hair upon their heads. Never before had I seen such bestial-looking creatures.
> Chapter 8.

Later, as night falls, he flees panic-stricken from a threatening man-like animal, and bursts back into Montgomery's shack to demand the truth about Moreau and the island's many Calibans from him. Moreau's assistant shows immediate concern, and voices his and Moreau's regret that they have failed to 'warn' Prendick about what he laconically calls 'our curiosities' (Chap.10). Prendick learns nothing more that night, but in the morning is able to steal a look at an example of Moreau's work because Montgomery has neglected to lock the shack behind him. The visitor leaps to an aghast conclusion: he is being kept to provide the next of Moreau's experimental subjects - 'Could the vivisection of men be possible? The question shot like lightning across a tumultuous sky. And suddenly the clouded horror of my mind condensed into a vivid realisation of my danger.'(Chap.10) Terrified, he flees into the jungle to escape his imprisonment and the terrible fate he believes Moreau has in store

for him.

At large on the island, Prendick's needs for survival oblige him to contact the strangely bestial inhabitants of a village. He is accepted by them only after he convinces them of his worth by reciting with them a pseudo-liturgical creed, the Law:

> We ran through a long list of prohibitions, then the chant swung round to a new formula:
>
> 'His is the House of Pain.
> His is the Hand that makes.
> His is the Hand that wounds.
> His is the Hand that heals."
> .....
> 'His the lightning flash,' we sang, 'His is the deep salt sea.'
>
> A horrible fancy came into my head that Moreau, after animalising these men, had infected their dwarf brains with a kind of deification of himself. However, I was too keenly aware of white teeth and sharp claws about me to stop my chanting on that account. Chapter 12.

The terrible results of Moreau's attempt to improve on nature by his vivisectionist meddling are brought home fully by Wells's introduction of a grotesquely ironic rhetorical question - 'Not to go on all-Fours; that is the Law. Are we not Men?'(Chap.12)

When Moreau does eventually catch up with Prendick, he explains to him that his aim is the reverse of that which Prendick suspected. He has been working on 'a humanising process', vivisecting animals to give them human characteristics. Moreau is disgusted that Prendick has wasted so much of his valuable time in having to pursue him, but Prendick, with the memory of the ritualistic social organisation of the Beast People still fresh, retains his both his doubts and his uneasiness.

While there are many evident parallels between the endeavours of Frankenstein and Moreau, there is an important distinction to be drawn here. Frankenstein's creature becomes monstrous because he is neglected by his creator; but Moreau has given the Beast People a

sort of moral code, The Law ('a long list of prohibitions', Prendick calls it), which paradoxically confirms his hubris. He has assumed more than the role of creator of the 'Men'; he also claims to have created their entire Cosmos, with himself as God. Moreau is a megalomaniac, like Frankenstein, but Moreau's aspiration to deification is more encompassing.

There is of course method in Moreau's madness - scientific method. He explains his methods and propositions in a lengthy, detailed, scientific disquisition which at first makes Prendick the scientist ashamed of his failure to recognise the 'triumphs' of vivisection Moreau has achieved.

> 'Surgery can do better things than that. There is building up as well as breaking down and changing. You have heard, perhaps, of a common surgical operation resorted to where the nose has been destroyed. A flap of skin is cut from the forehead, turned down on the nose, and heals in the new position. This is a kind of grafting in a new position of part of the animal upon itself. Grafting of a freshly obtained material from another animal is also possible - the case of teeth, for example. The grafting of skin and bone is done to facilitate healing. The surgeon places in the middle of the wound pieces of skin snipped from another animal, or fragments of bone from a victim freshly killed. Hunter's cockspur - possibly you have heard of that - flourished on the bull's neck. And the rhinoceros rats of the Algerian zouaves are also to be thought of - monsters manufactured by transferring a slip of the tail of an ordinary rat to its snout, and allowing it to heal in that position.'
>
> 'Monsters manufactured! said I. 'Then you mean to tell me --'
>
> 'Yes. These creatures you have seen are animals carven and wrought into new shapes. To that - to the study of the plasticity of living forms - my life has been devoted. I have studied for years, gaining in knowledge as I go. It lay in the surface of anatomy years ago, but no one had the temerity to touch it. It's not simply the outward form of an animal I can change. The physiology, the chemical rhythm of the creature may also be made to undergo an enduring modification...'
>
> Chapter 14.(21)

Throughout Moreau's visionary assertion of his own skills, admiration and suspicion vie in Prendick's mind. When the vivisector goes on to

speak of psychological adaptation, the spell is broken and Prendick is reminded forcibly of the extent of Moreau's conceited audacity:

> But I asked him why he had taken the human form as a model. There seemed to me then, and there still seems to me now, a strange wickedness in that choice.
>
> He confessed to me that he had chosen that form by chance. 'I might just as well have worked to form sheep into llamas, and llamas into sheep. I suppose there is something in the human form that appeals to the artistic turn of mind more powerfully than any animal shape can. But I've not confined myself to man-making...'
>
> Chapter 14.

Small wonder that Prendick was not convinced by Moreau's disingenuous profession of an aesthetic preference for 'man-making' rather than transfiguring other forms; after all, he has already encountered Moreau's worshipful Beast People, who differ psychologically from their original natures to a far greater extent than llamas do from sheep. His Beast People give Moreau a chance to play at being God, a role he covets to the point of having allowed his fascination with it to dominate his endeavours:

> 'Then I am a religious man, Prendick, as every sane man must be. It may be as I fancy I have seen more of the ways of this world's Maker than you - for I have sought his laws, in <u>my</u> way, all my life, while you, I understand, have been collecting butterflies. And I tell you, pleasure and pain have nothing to do with heaven and hell. Pleasure and pain--Bah! What is your theologian's ecstasy but Mahomet's houri in the dark? This store men and women set on pleasure and pain, Prendick, is the mark of the beast upon them, the mark of the beast from which they came. Pain! Pain and pleasure - they are for us, so long as we wriggle in the dust...'
>
> Chapter 14.

The singular irony of Moreau's representation of himself as a 'religious' man is that his way of praising the world's Maker is to try to promote his <u>own</u> ascetic but profane religion by trying to reinforce in other creatures what he admires in himself - to recreate them in his own image. His efforts will receive a grim, mordantly ironic vindication.

Even Moreau's scientific values have been distorted by his obsessive, egocentric drive to shape other beings to his will:

> 'You see I went on with this research just the way it led me. That is the only way I ever heard of research going. I asked a question, devised some method of getting an answer, and got - a fresh question. Was this possible, or that possible? You cannot imagine what this means to an investigator, what an intellectual passion grows on him. You cannot imagine the strange colourless delight of these intellectual desires. The thing before you is no longer an animal, a fellow-creature, but a problem...'
>
> Chapter 14.

All this is finally too much for Prendick - 'But,' said I, 'the thing is an abomination--'. Moreau's first response is that ethics are but sentimentality - 'To this day I have never troubled about the ethics of the matter. The study of Nature makes a man at least as ruthless as Nature', though of course natural philosophy has not changed Prendick's sensibility to anything approaching Moreau's mad obsessiveness, as Prendick is there to testify, albeit mutely most of the time.

Rationalism and sanity are of course not synonymous, and human nature is not purely intellective; and, for all his single-mindedness, Moreau cannot achieve an enduring transformation of his creatures. Nature will out: 'I have gone on, not heeding anything but the question I was pursuing, and the material has....dripped into the huts yonder...' The innate nature of the creature adapted by Moreau has always re-asserteds itself eventually:

> 'So for twenty years altogether - counting nine years in England - I have been going on, and there is still something in everything I do which defeats me, makes me dissatisfied, challenges me to further effort. Sometimes I rise above my level, sometimes I fall below it, but I always fall short of the things I dream. The human shape I can get now, almost with ease, so that it is lithe and graceful, or thick and strong; but often there is trouble with the hands and claws - painful things that I dare not shape too freely. But it is in the subtle grafting and re-shaping one must needs do to the brain that my trouble lies. The intelligence is often oddly low, with unaccountable black ends, unexpected gaps.

> And least satisfactory of all is something I cannot touch, somewhere - I cannot determine where - in the seat of the emotions. Cravings, instincts, desires that harm humanity, a strange hidden reservoir to burst suddenly and inundate the whole being of the creature with anger, hate, or fear. These creatures of mine seemed strange and uncanny to you as soon as you began to observe them, but to me, just after I make them, they seem to be indisputable human beings. It's afterwards as I observe them that the persuasion fades. First one animal trait, then another, creeps to the surface to stare at me... But I will conquer yet. Each time I dig a living creature into the bath of burning pain, I say: this time I will burn out all the animal, this time I will make a rational creature of my own. After all, what is ten years? Man has been a hundred thousand in the making.' Chapter 14.

Moreau's rationalistic attempt at what he considers to be human perfectibility - by demonstrating his own divine attributes - is cut short when he falls victim to his own creatures, as Frankenstein did. Again like Frankenstein, who laboured in his 'workshop of filthy creation' to improve on God's handiwork, Moreau aspires to emulate the divine creativity he covets by the mundane means of surgically transforming the bodies and minds of animals into human forms and humane consciousness. These would-be rivals of God fail because, however effectual their scientific practices might be, they themselves are imperfect, a traditional notion which their proud, progressive sensibility will not concede:

> The biblical authors...did not succumb to naive illusions about man. They were quite aware that though goodness and value might be the deepest stuff of existence, they do not go unchallenged. They recognized all too well that man's creative capacities and tendencies are assaulted by their negative counterparts; that man is beset by painful disharmony within himself, by bitter conflict with others individually and socially, and by antagonistic resentment of his God. In portraying this proclivity for destruction, they also projected it into the past. If there is something amiss with man now, it is because something went wrong at the beginning. From the first, the human race has been afflicted by a proneness to evil, by "original sin." Still, evil is less "original," less fundamental than goodness.
> 22.

In Frankenstein's case, this becomes clear when he spurns his own creature; in Moreau's, it is forcefully apparent in his inability to perfect his attempted re-creations of animals, all of which sooner or later revert. Ironically, what seems to Moreau to be a deterioration is in fact an amelioration of their condition, as their natural selves recover from the crippling surgical disfigurements to which they have been subjected by this deranged scientist. Their natural state may be less exalted than man's, but it is more wholesome and balanced than the terrible deformations Moreau inflicts in the name of science.

Temperamentally, the scientists of Wells and Mary Shelley are also alike in many respects. Like Frankenstein, Moreau is not a promethean figure, he is a faustian one, 'fallen under the overmastering spell of science' as Prendick suspects (Chap.7), a scientist whose aspirations destroy the objectivity of his calling, so that his science becomes reduced to merely being a means to a selfish if visionary end, in much the same way that Marlowe's Faustus exploits demonic power to serve his whims and to feed his appetite for personal power. Also, for Moreau, as much as for Frankenstein and Faustus, 'the fruits of experience are disillusionment', to borrow Levin's phrase(23); significantly, though, it is to Prendick - self-assured, positive-thinking Prendick - that the real lesson is left. The only surviving human on the island, he watches the Beast People devolve into merely disfigured beasts, and when he can stand it no longer, he constructs a raft to try to return to "civilisation". The success of his arduous voyage is blighted by the experience he carries with him because he is now persistently disturbed by his new perception of other people, who will always seem

to him to be suppressing the beast within:

> I feel as though the animal was surging up through them; that presently the degradation of the islanders will be played over again on a larger scale. I know this is an illusion, that these seeming men and women about me are indeed men and women, men and women for ever, perfectly reasonable creatures, full of human desires and tender solicitude, emancipated from instinct, and the slaves of no fantastic Law - beings altogether different from the Beast Folk. Yet I shrink from them... Chapter 22.

Prendick's recourse is to solitude, a studious, religious isolation which indirectly confirms the moral theme of the novel. 'There is, though I do not know how there is or why there is, a sense of infinite peace and protection in the glittering hosts of heaven.' He cannot be certain, he can only hope, that the retribution which overtook Moreau and Montgomery when they were destroyed by their own perverse creations is symbolic of a cosmic order which gives meaning to human existence, one which in creating human nature endowed men with 'shining souls' by design rather than by accident. Despite being 'a very pessimistic book'(24), The Island of Doctor Moreau ends on the note of Prendick's earnest hopefulness that there is an active if obscure Providence which orders the human universe; and at the outset determined that rational, spiritual humanity is the pinnacle of evolution. Recollecting his sharp denial when Moreau described him in Chapter 14 as a materialist, this soteriological conclusion accords well with his given character even if to the sceptical reader it seems absurd and sad.

Wells's own point of view of course could accomodate both Moreau's and Prendick's, but trying to assess which he was more inclined to is challenging(25). On the one hand, as a scientific rationalist himself he undoubtedly understood the attractions of the absorbing, compelling principles of scientific endeavour which, for

individuals who have the (mad) single-mindedness of a Moreau, reduce the world to a single, monolithic problem awaiting a logical, affirmative solution. He himself once believed that the world should be given over to scientists to be managed more effectively(26). On the other hand Wells also invented the agonizingly slow-witted Prendick, the wide-eyed, incredulous narrator who takes so long to put two and two together, and the ingenuous survivor of a boatful of would-be cannibals (including himself, of course, even if he never does class himself with the rough types in the lifeboat). We recall how he introduces himself to the man who saved his life with polite superiority: 'I told him my name, Edward Prendick, and how I had taken to natural history as a relief from the dullness of my comfortable existence.' (Chap.3) A "respectable" dabbler in science, Prendick can no more earn our respect (27) than become a second Moreau. Wells has drawn him as a bloodless caricature of a mannered conservative, a middle class, dilettante scientist whose liberal outlook (28) stands in the novel for what is reasonable rather than rational, and whose composure is so disturbed by the strenuous trials Wells puts him through that he retreats from the phenomenal, human world. Prendick's bourgeois complacency and his ideas of fair play and faith in the essential gentility of human nature have been riven beyond repair.

> When I lived in London the horror was well-nigh insuppportable. I could not get away from men; their voices came through windows; locked dooors were flimsy safeguards. I would go out into the streets to fight with my delusion, and prowling women would mew after me, furtive craving men glance jealously at me, weary pale workers go coughing by me, with tired eyes and eager paces like wounded deer dripping blood, old people, bent and dull, pass murmuring to themselves, and all unheeding a ragged tail of gibing children. Then I would turn aside into some chapel, and even there, such was my disturbance, it seemed that the preacher gibbered Big Thinks even as the Ape Man had done...
> Chapter 23.

This evocative and compelling description of how the city strikes Prendick on his return from Moreau's island shows how the man of means who had hitherto not noticed the squalor and hardship around him sees all too clearly for comfort. He has lost the partial vision produced by that "comfortable" social existence he once enjoyed. While then he was content in his privileged ignorance of the social experiences of his most of his contemporaries, now he must seek seclusion to preserve his own sanity. Having grown in self-awareness and having painfully acquired a dire vision of human existence, nothing around Prendick can ever again seem to him as it once did: the stars gleaming distantly are the only points to which his haunted, paranoid soul can look for constancy.

The Island of Doctor Moreau takes the form (after Frankenstein) of the terrifying story of the fate of a scientific hubrist who aspires to wield superhuman power and so seem god-like to a species re-created in his own image. However, Wells's presentation of this reflects his own values, and there is also finally more than a hint in his 'exercise in youthful blasphemy' that he found conventional religious belief unappealing. No doubt some of his like-minded readers would have relished the mordant wit of his unflattering allusion to the preacher who 'gibbered Big Thinks even as the Ape Man had done'.

Science, well-spring of the change which had outwardly altered the landscape and social relationships so greatly in the virtually uncontrolled upheaval of the Industrial Revolution, is symbolically represented as also being the source of a chronic disturbance of human attitudes and perspectives which is problematic but must be accommodated. If Moreau the extremist was 'hounded out of the

country' by the popular response to his experiments, Prendick, the Establishment man, has been forced into a form of self-imposed internal exile, unable to come to terms with his intense, morbid new awareness of society and human relationships. As Aldiss realises, 'If the characters are in part cliche, this is in part because they serve symbolic roles, and there is a symbolic quality about the whole that gives it the quality of Poe or of the French writers.'(29)

Wells of course does not approve of either protagonist very much, and in so far as he had an obvious reason for casting them as he did, he was astutely(30) exploiting the popular view of scientists as either madmen or polite dabblers, a view which ironically this novel does much to reinforce. Nevertheless, a truer picture of his actual attitude towards contemporary science is revealed if the book is seen as being structurally a sort of dialectic between the two stereotypes of the popular image of the scientist. A sophisticated scientific sensibility, he appears to suggest, embraces something of Moreau's visionary extremism and of Prendick's restraint - rationalism mediated by reasonableness, or, as Shaw put it some seven years later in The Revolutionist's Handbook(1903), 'The reasonable man adapts himself to the world: the unreasonable one persists in trying to adapt the world to himself..' However he, perhaps more perceptively than Wells, saw that the audacity of hubris, that desire to 'boldly go where no man has gone before,' (to adopt Star Trek's time-worn generic cliche) with the rest of us in tow, is an essential if worrying or uncomfortable part of the progressive urge: 'Therefore all progress depends on the unreasonable man.' Of course, in trying to decide what is "reasonable" and what is not, we face the riddle of the Sphinx; and in the end Wells is seemingly unable, or unwilling,

to speculate about the matter. The thematic concerns of The Island of Doctor Moreau seem to conform to James Gunn's general description of the emergent naturalism so characteristic of some of the more memorable science fiction of the first half of this century, but arguably that confirms more than contradicts the limited nature of the moral vision of which the book is in some sense a product:

> Under the influence of naturalism, science fiction adopted a view of man as an animal selected by environmental pressures for intelligence, aggressiveness, possessiveness, and survival; from the scientific optimism of the times, science fiction saw man also as an animal whose passions, aspirations, and understanding had given him a tragic nobility: he might not be divine but in his hubris and understanding he partook of divinity - he had eaten of the tree of life and of the tree of knowledge of good and evil; he was a creature who could dream of greatness and understand that it was only a dream.
>
> 31.

Wells's abiding interest in the moral complexities of evolutionary humanism broke new ground and sustained a debate about materialistic ethics which dominates philosophical science fiction written between the First and Second World Wars. Moreau anticipates the aloof Utopians of his 1923 Men Like Gods (discussed in Chapter 5). Olaf Stapledon's Odd John Wainwright of 1935 is their spiritual brother.

Darwinism, moral vision and the limits of human development are concerns which are brought together and explored in a very graphic way by Stapledon in Odd John(1935). Stapledon's science fiction does bear a debt to Wells's(32), none more obvious than in his handling of the evolutionary, cosmic time scales of works such as Last and First Men(1930) and Star Maker(1937; see Chapter 5 below). Odd John, however, is one of a pair of interesting novels (the other being Sirius, 1944; 33) which are written in what for Stapledon was really a less innovative narrative form than the more speculative medium of the 'cosmic' novels (like Star Maker) and for which he is more highly

regarded by some writers.

In Odd John we are given a speculative essay in which an individual with Moreau's disdain for human ethics and morality is presented as a superman, the next stage in the chain of human evolution. Greatness, to borrow James Gunn's term from the quotation above, is much more than a dream for 'Odd John' Wainwright - it is his birthright and his reality. In this novel, Stapledon playfully explores the 'Ubermensch' contentions of Neitzsche by giving them a "biological" credibility.

In the novels of Mary Shelley and Wells vivisection or surgical adaptation is as important thematically as structurally: Victor Frankenstein's hubris drives him to the creation (strictly, the re-creation) of a being only physically superior to himself; and Moreau's genius is bent towards improving on nature by transforming animals into people who will revere him and satisfy his egotistic divine madness. Odd John and his fellows are Nature's answer - Stapledon suggests not altogether seriously(34) - to those dual enigmas which have teased many of our best literary, scientific and philosophical minds: our place in the grand scheme of things which daily pushes the phenomenal world ever nearer the end-point of Nature; and whether Homo sapiens, with all our religious, ethical and scientific paraphernalia, truly are the earth's ultimate landlords, or merely tenants who will be evicted sometime by the superhumans who will inherit the earth in their turn.

The novel is an account of the life and opinions of 'Odd John' Wainwright, a lusus naturae, a prodigious genius whose development as a child and activities as a young adult are as offbeat as they are plausibly "superhuman". As his biographer records, even John's early

physical development is peculiar - he is brought into the world prematurely after his mother had to have an eleven-month pregnancy obstretically ended in order to survive it, and then he remains in an incubator for a year. His intellect is soon revealed to be quite unusually powerful and independent, so much so that he allows himself several bouts of self-indulgently deviant behaviour. Learning more and more about his superiority, John knowingly plays fast and loose with the moral conventions about property, sex, and even murder which are the basis of 'civilised' British social behaviour. John, though, is more than non-conformist. Rather than simply ignore the aspects of his native culture which he despises, he sets out to fulfil his personal dream of establishing a community of fellow mutant super-beings to foster Homo superior. To this end, he exploits the economic and financial institutions of Britain and the rest of the world to provide himself with the needed resources by inventing new devices or introducing technological processes for which he holds the patents.

Two aspects of John's early years (which can hardly be called his "childhood") are particularly relevant to the present(35) discussion of the role of hubris and rationalism in science fiction - his natural drive for dominion over others; and his rationalism, something which, like Moreau's 'sanity', is very distinct from reasonableness, as John's explanation to his biographer of his murder of a policeman shows.

Taking the former first, however, his relationships with friends of his own age and his experiences of adults are used by Stapledon to establish John's personality in those early years during which he gropes towards an understanding of the world. His precociousness and

the staggering wealth of knowledge he accumulates at first haphazardly are resented by his co-evals and disliked by their parents. John uses knowledge to oppress one ('beastly cocky little freak' p.26), and to impress the other, especially after a chastening fight with Stephen, an older lad ('John's a dear these days. He's lost all his horrid freakishness and conceit.' p.28).

Ironically, John is deceptively quiet, for he is preparing studiously to win his next encounter with Stephen and sweep away the humiliation he has suffered after the other boy has given him a hiding for daring to make improvements to his father's motormower. First he studies of anatomy and physiology, aided by his father, a doctor; then, he applies body and mind to become expert in the martial arts; finally, he takes up gymnastics and exercise for strength and stamina. In the meanwhile, this prodigy has been to school for three weeks and then been excluded, being 'subnormal' and 'too disturbing'. The outcome of this preparation is a fight in which John quite overwelms the stronger lad, Stephen, 'the most formidable of his acquaintances':

> We stood bewildered by this unexpected turn of events. John looked around, and his eye met mine. Never have I seen so arrogant, so hideous an expression of the lust for power as on that childish face.
>
> Odd John, p.30

The point of view here is the narrator's, John Wainwright's biographer, a childhood friend who overcomes his shock at learning at first hand that there is an unexpected cruelty in John. He becomes so enthralled(36) with this rather unattractive being that he stays with him until John dies, showing only occasional feckless irritation when John calls him 'Fido'. Even if the narrator is supine, he is not unperceptive, and he notices a subtle change in John after the fight,

('Well, John got what he wanted. And having got it, he saw in a flash and once and for all, right through it and beyond it.') though he leaves us to guess at what this may be. In fact, John has learned two things: firstly that knowledge will bring him power which he can then use to gain the respect of humans who presently despise him. John, of course, has contrived the whole fight to test the validity of this hypothesis, but also perceives that the application of that knowledge to chastisement or forcible persuasion of the reluctant demeans both himself and his victim.

Concerning the murder, John again learns something about himself from it, for, as he later calmly explains to his human acolyte who recalls it for posterity, he was 'in a bad mess mentally in those days.'(p.43) Perhaps anticipating a reaction of bewilderment or horror from his servile amanuensis, John further explains,

> 'I can't possibly make you understand the horrible muddle I was in, because after all your mind doesn't work along the same lines as mine. But think of it this way, if you like. I found myself in a thoroughly bewildering world. The people in it had built up a huge system of thought and knowledge, and I could see quite well that it was shot through and through with error. From my point of view, although so far as it went it was sound enough for practical purposes, as a description of the world it was simply crazy. But what the right description was I could not discover. I was too young. I had insufficient data. Huge fields of experience were still beyond me. So there I was, like someone in the dark in a strange room, just feeling about among unknown objects....'
>
> Odd John, pp.43-44.

The way forward for John is to acquire sufficient means to allow him to learn everything anew, from first principles. Understanding the world through personal experience, he integrates his discoveries about it to form a more authentic view of it to replace the 'crazy' if 'practical' one accepted by everyone else he knows. To this end, he commits a series of clever burglaries which baffle the police, to

the point where they have to mount guard on individual properties they think will prove tempting. This does not worry John over-much, but it is to be the occasion of his hideously cold-blooded murder of an amiable neighbourhood policeman whom he knows well. Moved not so much by an instinct purely of self-preservation but by the realisation of what hangs in the balance, John becomes but judge, jury and executioner - or so he would have us think:

> An idea toward which I had been long but doubtfully groping suddenly displayed itself to me with complete clarity and certainty. I had already, some time before, come to think of myself as definitely of a different biological species from Homo sapiens, the species of that amiable bloodhound behind the torch. But at last I realized for the first time that this difference carried with it what I should now describe as a far-reaching spiritual difference, that my purpose in life, and my attitude to life, were to be different from anything which the normal species could conceive, that I stood, as it were, on the threshold of a world far beyond the reach of those sixteen hundred million crude animals that at present ruled the planet. The discovery made me feel, almost for the first time in my life, fear, dread. I saw, too, that this burglary game was not worth the candle, that I had been behaving very much like a creature of the inferior species, risking my future and much more than my personal success for a cheap kind of self-expression.
>
> Odd John, p.46.

In that moment of quasi-theophany, of his sobering perception of his true nature with near-divine clarity and certainty, John becomes not the patriarch of his species (his attempt fails, and therein lies his own tragedy) but the forerunner of a legion(37) of secular messiahs whose transfigurations are the very stuff of the transcendental science fiction of the nineteen-seventies and eighties. Nevertheless, John's remorse is not the sort we are accustomed to think of in such situations - he is revolted by the act which his newly found sense of responsibility forces upon him, and though the callousness of his act carries with it self-recrimination about the immature conduct which has produced this awful moment, his distaste is aesthetic rather than

ethical. Indeed, his cold-bloodedness comes across particularly forcefully in his almost off-hand reference to that 'inferior species' to which we all belong. For all that, he does feel compelled to justify his crime further, though his profoundly selfish motivation has also to contend with what is made to seem like 'immature' guilt:

> How could I do it? Well, it just had to be done, there was no way out of it. I thought of killing myself, and getting out of the whole mess that way. But I couldn't do that. It would be sheer betrayal of the thing I must live for. I thought of just accepting Smithson and the law; but no, that, I knew, was betrayal also. The killing just had to be. It was my own childishness that had got me into this scrape, but now - the killing just had to be. All the same, I hated the job. I had not yet reached the stage of liking whatever had to be done. I felt over again, and far more distressingly, the violent repulsion which had surprised me years earlier, when I had to kill a mouse.
>
> Odd John, p.47.

'You must have felt pretty bad on the way home,' says his biographer sympathetically; 'As a matter of fact,' John replies, 'I didn't. The bad feeling ended when I made my decision.' This decision of course is to act responsibly henceforward, always with self-preservation determined according to his coolly rational lights well to the fore. John Wainwright thus becomes a sort of sardonic lesser god, capable nonetheless of dispassionately exercising ultimate authority on earth over the lives of mankind, the inferior race whom he will permit to share the world with himself and his fellows.

It is a mark of Stapledon's narrative skill and the sophistication with which he handles his theme that despite all this he can later bring us to see that the plight of John's kind is tragic, and later still induce us to feel some pity, perhaps, or regret, for the manner of his dying. There is, however, another indication of the bizarre nature of John's moral vision to be gleaned from this episode, showing that he can be touched by the plight of others, if

in a startlingly unsentimental way. John knows that the constable's wife is alone at home in great pain, racked with cancer; and since he also knows that she will be 'heart-broken' when she is told her husband has been murdered, he decides that he will 'take one more risk and put her out of her misery.' She escapes his tender mercies because she is awake, and the house is lit too brightly for him to make his way in to her. John consoles himself with a kind of fatalism, a sort of resignation to the demands of his newly-discovered stature - 'What must be, must be,' but there is more than a touch of a mischievous irony introduced here by Stapledon which undercuts the sombreness of the crime, and makes it seem almost illusory.

Judging the moral position of John, or indeed of his author, in this story "between Jest and Earnest" is difficult, not least because of the mock-ironic note which every now and then filters through to the reader. Call the narrator an abject creature if you will, decry him for an infatuated, infuriating traitor, but at last recognise that he retains enough honesty and independence of spirit to know himself for what he is, and has the sense to resent John's demeaning jibes; and something of the complex relationship between the sonorous and the ludicrous in this subtle(38) novel emerges. Stapledon has contrived a quite self-consistent if far-fetched situation in which complex moral issues are derived from familiar human passions and prejudices and contrasted with the values of John's awesomely superior outlook. The factor which clinches this for Stapledon is that he has endowed John with an ethical sensibility which is convincingly un-human rather than inhumane (none of the superhumans are gratuitously cruel), and his actions are justified to make it seem that there is a terrifying logic to every decision he takes, however

crucial. The eugenics programme using humans much as a scientist would use laboratory animals(39) is a good example, one which at least one critic has earnestly protested:

> How strange that Stapledon, who believed in absolute rather than in utilitarian ethics, has his supermen commit utilitarian murders without, apparently, questioning seriously what they are doing. Perhaps Stapledon is writing a monster story, but how does this story fit with the story of beings who are more fully awake than we are? Experimentation with human beings against their will is one of those obscene subjects about which one ought not to write without being very clear about why one is doing so; such experimentation is much too close to what has happened and does happen.
> 40.

However we feel about the propriety of Stapledon's subject-matter, it would be wrong to think of John as amoral in the conventional sense as his sensibility is literally inhuman. Smith concedes, 'I must not be too critical of Stapledon. It is impossible to write a superman story, every bit as impossible to write cosmic stories. Supermen have faculties and purposes beyond human understanding. Almost by definition, then, supermen cannot be described in an altogether understandable way.'(41) This avoids the issue; if supermen, and their motivation, cannot be adequately described by a human author, if they act in accordance with 'higher' moral imperatives which we cannot hope to comprehend, why has this particular kind of story retained its popularity? One answer, suggested by Damon Knight in another context, is illuminating:

> Science fiction exists to provide what Moskowitz and others call 'the sense of wonder': some widening of the mind's horizons, no matter in what direction - the landscape of another planet, or a corpuscle's-eye view of an artery, or what it feels like to be in rapport with a cat... any new sensory experience, impossible to the reader in his own person, is grist for the mill, and what the activity of science fiction is all about.
> 42.

While this explains the imaginative aspect of stories like Staple-

don's very well, another which is just as important is their presentation of ethical satire. John Wainwright's utilitarian, self-centred moral perspective is very much in character; and it convincingly conveys, too, what we might, in our worst nightmares, expect a superhuman or alien being to see in us. Furthermore, it is satirical; John's Homo superior outlook is an instrument or device for exposing contemporary moral values and social complacency to scorn. Stapledon is here more effective than Wells in The Island of Doctor Moreau because he makes better use of psychology. The seeming weaknesses of the moral values accepted by society are revealed by holding them up to extreme reason, in the full knowledge that the reader can be relied upon to see such ethical principles as John's as "mad" or "inhumane", much as Shaw asserted in describing the durability of prevailing moral and ethical ideas:

> That the real Superman will snap his superfingers at all Man's present trumpery ideals of right, duty, honor, justice, religion, even decency, and accept moral obligations beyond present human endurance, is a thing that contemporary Man does not foresee.
>
> 43.

However, Stapledon's irony shows he knew that the excessive rationality which determines John's response is itself a form of dogmatism, perceived by the reader to be just as "crazy" to Everyman as the morality John has decided to ignore before killing the policeman. The whole point of the endeavour, of course, is to entertain and to engage. Drawn into the novel, we find ourselves seeing things from a different angle, so that aspects of our personal moral vision are challenged, and confirmed - or, perhaps, reassessed; some of the less inspiring aspects of Neitzschean ideas are exposed for us thereby.

Neither Moreau nor Odd John are truly Faustian figures in the sense that they must defer to a higher, supernatural order which en-

sures the propriety of human endeavours. Shaw could just as easily have spoken for Wells and Stapledon when he wrote this about his Man and Superman:

> Even the more abstract parts of the Don Juan play are dilapidated past use: for instance, Don Juan's supernatural antagonist hurled those who refused to repent into lakes of burning brimstone, there to be tormented by devils with horns and tails. Of that antagonist, and of that conception of repentence, how much is left that could be used by me...? 44.

In effect their authors have developed for them unconventional views of the world and its morality to which both figures are bound by what appears to be an innate compulsion to order their experience according to some kind of ultimate principle. Moreau convinces himself of the soundness of scientific rationalism to the point where he became lost within it so that human concerns and emotions become virtually devoid of meaning or consequence. On the other hand, while Odd John's biographer argues that John is not arrogant, he is certainly a law unto himself, quite literally, pursuing his own objectives with single-mindedness until his colony is achieved. In their different ways both protagonists crave deification: 'hom.sap.' Moreau sought, with Frankensteinian enthusiasm, to create a race of beings to worship him; and Odd John betrays, in the pleasure he takes in being adored by 'Fido', a similar appetite. This is why we reject them in the end, no matter how mad, noble or dedicated they seem, as surely their literary creators knew we would.

Verne's Providential Universe and Well's Dispassionate Cosmos.

If The Island of Doctor Moreau is indeed 'a very pessimistic book' then Wells's first novel, The Time Machine, is utterly melancholy. Wells's novel is related in many respects to a well-establi-

shed genre of predictive fiction which includes(45) S.Madden's The memoirs of the twentieth century: being the original letters of state under George the Sixth...(1733); and Mary Shelley's gloom-ridden vision of the annihilation, towards the end of the twenty-first century, of the people of Europe, The Last Man(1826) (Aldiss(46) thought it 'no more than Gothic'). More recent examples are A crystal age, by W.H.Hudson (1887), and Edward Bellamy's 1889 projection of an 'organized and socialistic future world,' Looking backward, 2000-1887, a very influential book which was 'translated into most European languages....it provoked William Morris so much that he wrote his own idea of a better future, News from nowhere(1888)'(47). Clearly Wells did not lack audacity in embarking on his career as a novelist in such a controversial genre and in such celebrated company; his success in achieving recognition with an "apprentice" novel can be understood readily even today, for the power of its ultimate vision of the end of our existence as a species is undiminished. This chilling, haunted desolation recalled by the Time Traveller will signal the last stage of the cooling of Earth:

> 'The darkness grew apace; a cold wind began to blow in freshening gusts from the east, and the showering white flakes in the air increased in number. From the edge of the sea came a ripple and a whisper. Beyond these lifeless sounds the world was silent. Silent? It would be hard to convey the stillness of it. All the sounds of man, the bleating of sheep, the cries of birds, the hum of insects, the stir that makes the background of our lives - all that was over. As the darkness thickened, the eddying flakes grew more abundant, dancing before my eyes; and the cold of the air more intense. At last, one by one, swiftly, one after another, the white peaks of the distant hills vanished into blackness. The breeze rose to a moaning wind. I saw the black central shadow of the eclipse sweeping towards me. In another moment the pale stars alone were visible. All else was rayless obscurity. The sky was absolutely black.
>
> The Time Machine, Chapter 11.

Wells's bleak vision of a depopulated world, 'conveyed with a poetic intensity he was never to recapture' as Bernard Bergonzi, one of his most recent biographers, notes(48), evokes those "sublime" feelings of awe and dread of the absolute which were first associated popularly with science in Frankenstein. Nevertheless this entropic projection of the future of humanity was something new to contemporary readers who probably had encountered visions of apocalyptic catastrophe in Scripture, but never before in a "scientific" context. It retains its remarkable power even at this distance, with the decades since Wells crowded with the disaster novels of such successors as Wyndham(The Day of the Triffids); Christopher(No Blade of Grass); Stewart(Earth Abides); and Vonnegut(Cat's Cradle); not to mention the real or imagined threats we have come to accept as a part of everyday living such as nuclear accident, biological or nuclear warfare, and "nuclear winter". Wells's terrible image remains vivid and dire as ever because it is a dramatic, ratiocinative rebuttal of the cosy assumption that human social and personal development will naturally continue much as before. As a mid-nineteenth century social theorist, Herbert Spencer, saw it, 'Progress, therefore, is not an accident, but a necessity... It is part of human nature."(Social Statics, 1850)

The Victorian Positivism championed by Spencer was a blend of socio-economic ideas and the technocratic scientific outlook encouraged by the successes of the Industrial Revolution. Its central tenet of social progress depended upon a view of human development (personal and social) which was essentially linear. This in turn accorded with a Christian view of life as being a sort of "pilgrim's progress"; one in which the history, present and future of humanity were between Eden and the Last Judgement(49) somewhere along

the infinite time-scale fore-ordained by God. The Positivists and Western racial suprematists everywhere asserted that with or without divine intervention, evolution had determined that an exclusive group should occupy a position which permitted them to exercise dominion over the world. Swinburne might contend that 'Man is the master of things', but Wells implied that there was an end-point to human growth after which the race would regress. Moreover, this was no less ineluctable, under certain conditions, than that evolutionary process which had brought civilisation into being. Undoubtedly the singular effectiveness of Wells's novel derived from its creative tension with the self-assurance of optimistic Victorians. Above all, hadn't the Time Traveller who relates his adventures to an audience of comfortable clubmen (and of course the reader) - hadn't he actually been there, as the flowers he brought back from the "human" world of 802,701 seem to vividly attest?

Before examining how Wells's fin-de-siecle(50) novel portrays the decline of society on that long, straight road to human extinction, it might be of value to review the more conventional view of Progress promoted by Wells's rival(51), Jules Verne (1828-1905).

Verne was an unashamed popularist. His fiction fairly crackles along with incident piled on incident - interrupted now and then, of course, by a rapt description of the huge machine central to the story - so that the pell-mell pace of his adventure stories is unimpeded, largely, by attention to character development or sophisticated analysis of situations or relationships. The Begum's Fortune(1880; published in 1879 as Les cinq cent millions de la Begum) is not exceptional in any of these respects save one - Verne's depiction of science and technology as at least potentially dangerous

in the wrong hands. This feature apart, judged even by the standards of some of today's popular fiction, it would be considered a childish, dull novel(52). Yet this novel, written by Verne in his early fifties, is of some interest here because, however ingenuously, it conveys the ambiguity of the prevailing popular view of science and scientists one may also infer from Taylor's 'occasional moments of alarm':

> Victorians generally tended to regard the fruits of science as an unmixed blessing, in spite of occasional moments of alarm. Jules Verne's science fiction was 'the almost archetypal expression of nineteenth-century romantic interest in science and technology.' 53.

While attending an international scientific conference, Dr.Sarrasin has learned that he has unexpectedly inherited a vast fortune. He immediately writes to his son Otto, expressing his misgivings about the change it may bring to their dedicated pursuit of scientific research (54): 'In the modest position of pioneers of science we were content and happy in obscurity. Shall we continue to be so?' (Chapter I). The 'worthy' Doctor answers his own question: 'I doubt it - unless - perhaps - (could I venture to mention an idea which has just flashed across my brain?) unless this same fortune were to become in our hands a new and powerful engine of science, a mighty tool in the great work of civilization and progress!' Since Verne has already equated money with power, Sarrasin's unexpected windfall has of course saved Verne the trouble of contriving a halfways-plausibly lucrative invention. Thus provided with ample resources, our philanthropist invites his astounded audience to join with him in exercising this power to change the world for the better:

> "Yes, gentlemen, it is true that a large sum of money,.. appears to be legally my property. I consider myself simply as a steward, entrusted with this wealth for the use and benefit of science..." (Immense sensation.)

"This treasure belongs, not to me but to humanity - to progress!"

"I declare..that the twenty-one million pounds placed in my hands belongs not to me, but to science! Will you, gentlemen, undertake the management and distribution of it?"

The Begum's Fortune, Chapter III.

It is striking that this scientific vir bonus, Dr. Sarrasin, uses terms like "humanity", "science" and "progress" so freely that they appear to be virtually synonymous.

To the general acclamation of the Brighton Conference, Sarrasin reveals his plan to build a model city, Frankville, which will provide a perfect haven for refugees and fugitives from urban or industrial slums. Now that Verne has established the character of his paternalistic if staggeringly benevolent scientist, he introduces the absurdly villainous Prof.Schultz of Jena as his rival(55). Having been drawn from the preparation of his latest treatise; 'Why are all Frenchmen affected by different degrees of hereditary degeneracy?' - the bad Prof. realises that he has a claim to half of Sarrasin's inheritance. By the end of its third chapter the novel is verging on naive self-parody, but we shall bear with it. In Chapter IV it is decided, once a conniving "Anglo-Saxon" solicitor has bilked them for half a million pounds each, that the remaining twenty million should be shared equally between them, and so Schultz resolves, to prove the ascendancy of the Fatherland, to construct a city which will crush Frankville: '"I hope," he added, "that the experiment we shall make will serve as an example to all the world!"' Five years later, Stahlstadt - Steel Town - stands in Oregon, and the obnoxious Schultz, reaping profits from the manufacture of armaments in his regimented city, is preparing the largest-ever cannon, with which he plans to level the thriving, happy city of Frankville, only 30 miles distant:

> The happy city of Frankville was prospering, its beneficient institutions favouring each and all, and giving a new horizon of hope to a disheartened people. Max had no doubt that in the face of such a triumph of the Latin race, Schultz would be more than ever determined to make good his threats. Stahlstadt and his factories were a proof of that.
> The Begum's Fortune, Chapter VII

Max, a student friend of Otto (Octavius) Sarrasin, acts both as an agent provocateur and fifth-columnist, and manages to frustrate the plans of Schultz, whom he loathes. A brilliant engineer, Max is given the task of overseeing the design of the huge cannon by Stahlstadt's vicious founder. He takes the opportunity to save Frankville by ensuring that when the cannon is fired, its projectile will simply go into orbit, leaving the gun ruined beyond repair. He then takes himself off to Frankville, where he joins forces with Sarrasin and his people to defend their town. In the meantime, though, Schultz's business has collapsed after his apparent disappearance. The unfortunate workers, whose trials have been colourfully described through several preceding chapters, are left by Schultz to their own devices. The redoubtable Max, accompanied by Otto, sets out to discover what Schultz has been up to. They find Schultz, killed in his secret laboratory by his last evil invention, frozen in the moment of death while signing the order for a new attack on Frankville. Verne makes the association with Frankenstein virtually explicit when, after hearing of Schultz's fate, Sarrasin sums up his end in the novel's only distinctive allusion to God:

> "Yes," returned Doctor Sarrasin, "here we see the justice of God! It is because he indulged in his hatred against us, and urged on his attack with such boundless rancour, that Herr Schultz has perished." Chapter XVIII 56.

The homily is continued into a very brief concluding chapter wherein Verne reports, from a point of vantage a year or two later, that the moral protagonists have successfully set Stahlstadt back on its feet,

restoring the fortunes of all those who had stood to lose.

Verne's novel suggests that science and technology could be misapplied to oppress rather than enlighten and liberate(57). Also, though he ascribes Schultz's downfall to the unstinting and somewhat improbable efforts of a young hero, he also invokes divine retribution as the ultimate vindication of Max's betrayal of Schultz. While Verne thus absolves himself of seeming to endorse the merely pragmatic destruction of Schultz, if the logic of this is taken to its conclusion it suggests that he has cast Max not just as hero, but as the very instrument of God. On the other hand, as Brian Aldiss notes(58): 'In Verne...we find descents, even to the earth's core. The symbolic significance is nil.' - being generally simple, Verne's narratives do not offer many opportunities for searching interpretation since his style is expository and melodramatic.

If, true to form, Verne neglects religion as a social institution in The Begum's Fortune (the only other religious reference, to the Cathedral and chapels of Frankville, is made en passant in a German report on the principles of town planning which dictates the city's construction) he exploits Christian ethics freely to reinforce his ideas about wholesome science and pernicious science. Wells seems to go further by invoking Darwin's evolutionary theories in The Time Machine when he depicts humanity corrupted by its own nature regressing steadily to extinction in an universe seemingly devoid of divine involvement in human affairs.

The Time Traveller has stepped from his conveyance into the intriguing future world to which it has carried him. The thunderous noise of his arrival has attracted some of the apparently inoffensive locals, and he discovers that he can only communicate with them in

sign-language. He confronts his misgivings - 'What if in this interval the race had lost its manliness, and had developed into something inhuman, unsympathetic, and overwhelmingly powerful? I might seem some old-world savage animal..a foul creature to be incontinently slain.'(Chap.3), - to have them allayed, ironically, by their first question:

> The question had come into my mind abruptly: were these creatures fools? You may hardly understand how it took me. You see I had always anticipated that the people of the year Eight Hundred and Two Thousand odd would be incredibly in front of us in knowledge, art, everything. Then one of them suddenly asked me a question that showed him to be on the intellectual level of one of our five-year-old children - he asked me, in fact, if I had come from the sun in a thunderstorm! It let loose the judgement I had suspended upon their clothes, their frail light limbs and fragile features.
>
> A flow of disappointment rushed across my mind.
>
> The Time Machine, Chapter 4

By evening the Time Traveller has shared a meal with these people in their vast hall, learned a few of their words, and formed a theory about events during the many centuries which separate his society and this one. He decides that these strangely langorous, fruit-eating people are decadent Communists. While he does not resent the commensalism of their social organisation, he cannot help thinking of them as having gone to seed. Their ancestors had overcome the competitive pressures caused by overpopulation and provided an innocuous, salubrious environment free from insect nuisance and the threat of disease. With nothing left to contend against, he concludes, there has been a marked and regressive decline in the active principle of human nature. Though he has made a reasoned assessment of their circumstances, based on the evidence, among other things, of the huge, ruinous and enigmatic buildings(59) around them, as he later acknowledges to his select audience, 'Very simple was my

explanation, and plausible enough - as most wrong theories are!'

One thing in particular puzzles him, for he can see no trace anywhere of the productive technology needed to provide the food and clothes of the Eloi.

> The several big places I had explored were mere living places, great dining-halls and sleeping apartments. Yet these people were clothed in pleasant fabrics... Somehow such things must be made... There were no shops, no workshops, no signs of importations among them. They spent all their time in playing gently, in bathing in the river, in making love in a half-playful fashion, in eating fruit and sleeping. I could not see how things were kept going.
> Chapter 5.

The Time Traveller discovers more of the truth about the nature of society in this post-scientific world when he is forced to recover his time machine from the hideous, disturbingly brutish creatures who live underground, the Morlocks. He forms a more elaborate theory to take into account the 'bleached, obscene, nocturnal Thing' which he sees scuttling to safety down a well 'like a human spider.' He decides that what he has seen represents a subterranean humanity, the other element produced by an evolutionary process which has consolidated and emphasised the dualistic nature of his society ('the Haves' and 'the Have-nots', as he quickly characterises them) so that two divergent strains of human beings have been created as the situation prevailed down through the millenia.

> 'At first, proceeding from the problems of our own age, it seemed clear as daylight to me that the gradual widening of the present merely temporary and social difference between the Capitalist and the Labourer, was the key to the whole position. No doubt it will seem grotesque to you - and wildly incredible - and yet even now there are existing circumstances to point that way. There is a tendency to utilise underground space for the less ornamental purposes of civilisation... Evidently this tendency had increased till Industry had lost its birthright in the sky... Even now, does not an East-end worker live in sch artificial conditions as practically to be cut off from the surface of the earth?

> 'Again, the exclusive tendency of rich people - due, no doubt, to the increasing refinement of their education, and the widening gulf between them and the rude violence of the poor - is already leading to the closing, in their interest, of considerable portions of the surface of the land. About London, for instance, perhaps half the prettier country is shut in against intrusion. And this same widening gulf which is due to the length and expense of the higher educational process and the increased facilities for and increased temptations towards refined habits on the part of the rich - will make that (marital) exchange between class and class, that promotion by inter-marriage which at present retards the splitting of our species along lines of social stratification, less and less frequent. So, in the end, above ground, you must have the Haves, pursuing pleasure and comfort and beauty, and below ground, the Have-nots; the Workers getting continually adapted to the conditions of their labour. Once they were there they would, no doubt, have to pay rent, and not a little of it, for the ventilation of their caverns; and if they refused, they would be starved or suffocated for arrears. Such of them as were so constituted as to be miserable and rebellious would die; and, in the end, the balance being permanent, the survivors would be as well adapted to the conditions of underground life, and as happy in their way, as the Upper world people were to theirs. As it seemed to me, the refined beauty and etiolated pallor followed naturally enough.
>
> The Time Machine, Chapter 5.

Much has been made of the Time Traveller's explanatory theories by critics seeking to establish Wells's view of contemporary society. One of the most persuasive is Bernard Bergonzi, who has convincingly argued that the novel is a vehicle for an ironic myth (60) cleverly fashioned by Wells.

While searching in vain for his machine in the claustrophobic galleries of the Morlocks, the Time Traveller discovers that the creatures are carnivorous. He finds this puzzling - 'I remember wondering what large animal could have survived to furnish the red joint I saw.'(Chap.6) - but the truth conflicts so greatly with his second theory, and goes so much against the grain of his sensibility, that its final emergence is devastatingly ironic, especially since he must also overcome the preconceptions he has formed about Weena, one

of the Eloi with whom he has formed a romantic liaison of sorts:

> Then I thought of the Great Fear that was between the two species, and for the first time, with a sudden shiver, came the clear knowledge of what the meat I had seen might be. Yet it was too horrible! I looked at little Weena sleeping beside me, her face white and starlike under the stars, and forthwith dismissed the thought.
> The Time Machine, Chapter 7.

Nevertheless the thought is too disturbing and insistent to be so easily ignored. He recognises at last that at some point in the dim, obscure, cumulative collapse of the mighty civilisation whose ruins (such as those of the vast neglected museum, the Palace of Green Porcelain) lie like inscrutable memorials everywhere, a degenerate mankind - 'these inhuman sons of men' - began preying on their fellows as food had run short, and, as the Traveller will later remark with as much composure as he can summon, 'These Eloi were mere fatted cattle, which the ant-like Morlocks preserved and preyed upon - probably saw to the breeding of!'(Chap.7) The Time Traveller's cultural expectations have been quite overturned by his perception of the real nature of the relationship between the two groups; the Morlocks, descendants of the workers who once maintained society's affluent, comfortable aesthetes, now have the upper hand. He had been mistaken in thinking them exploited, forced to live underground in discomfort and gloom; rather, they have long since chosen to continue to pursue their habitual way of life, though now they exploit the Eloi(61). If we contrast Wells's conclusions about the outcome of the scientific innovation so important to many Victorian idealists with how Verne portrays the Golden Age of Reason to be ushered in by Dr. Sarrasin and his like, the depth of the despair, of the humanistic pessimism with which Wells viewed the human response to science, is apparent:

> 'The great triumph of Humanity I had dreamed of took a different shape in my mind. It had been no such triumph of moral education and general co-operation as I had imagined. Instead, I saw a real aristocracy, armed with a perfected science and working to a logical conclusion the industrial system of today. Its triumph had not simply been simply a triumph over nature, but a triumph over nature and the fellow-man.
>
> The Time Machine, Chapter 5.

The Time Traveller's revulsion at the Morlock's utilitarian solution to their food problem is humanistic, not religious. Then again, he does occasionally implore God for help, but only in desperation; so God and Christian values seem to be quite absent from this future which belongs to the soulless Morlocks and enervated, pathetic Eloi. Wells, of course, has excluded religion quite deliberately. Wells characterises intelligence and initiative as extremely important human resources in creatively adapting the natural world (the hubristic, i.e., 'the rebellious', are among the first to perish among the Morlocks' ancestors). The other human attribute he sees as indispensable to balanced development is a humane (emphatically not utilitarian) form of scientific materialism, a sort of rational morality.

Parted from Weena during a confused struggle with the nightmarish Morlocks, the Traveller next day discovers that they have set a trap for him, baiting it, to his grim delight, with his Time Machine. They spring the trap on him, but of course he merely operates the machine and it carries him even further into the future. So it is that by setting his controls the wrong way in his haste, he comes to find himself on that desolate beach where, moved by 'a strange fascination', he continues on in millenial bounds through time until after travelling more than thirty million years into the future he is forced to turn away from that last terrifying eclipse of the dying

sun, and return to the time from whence he set out.

Wells's story becomes a paradigm of humanistic despair when the Time Traveller looks at the swollen, dying sun, and flinches from the cold emptiness which is all he can discern there. If God exists, Wells seems to suggest, it is as a depressingly remote, utterly indifferent Deus absconditus whose intervention in supporting a chosen race or species cannot be ascertained, the complete converse of Verne's coincidental Providence which ensures that the good win in the end over the impure or malicious. In Verne's fiction, God may be said to work in mysterious ways; in Wells's, God is conspicuously absent. Frankville has its churches (mosques and synagogues do not feature, for all Verne's vaunted cosmopolitanism); but in Wells's fiction the clergy fare less comfortably. To take a relevant example, in The War of the Worlds(1898) the Martians destroy virtually the entire district of Weybridge in Surrey, but for the demented curate the real loss lies in the destruction of his newly-rebuilt church and the reduction of all his efforts with the Sunday School. Seeing that the curate's faith has deserted him in the aftermath, Wells's pragmatic narrator tries to brace him with the challenge, 'What good is religion if it collapses under calamity?' The curate cannot or will not answer; but the Time Traveller certainly could have advised the narrator of how little evidence there was in 802,701 A.D. that religion survives the degeneration of mankind or prevents the decline of society, just as he himself cannot find much solace in religious philosophy when he sits in on the death of the Earth. Thus religion, to answer the narrator, will not stand the test of time.

The Time Traveller and Prendick have a similar response to cold, unremitting logic, for both reveal a dread of extremes, of

'Necessity' in the one case, and scientific rationalism in the other. The Time Traveller also emulates Prendick's more obvious alienation from his kind; he returns to his own time to tell his story and recuperate, but, as the narrator of The Time Machine makes plain in the Epilogue, he can see perhaps better than anyone the pernicious divisiveness in contemporary society which might one remote day result in the 'inhuman' world of the Morlocks and Eloi, and after it again, would prove humanity to be an evolutionary blind tunnel, a dead end. As the narrator recalls, 'He..thought but cheerlessly of the Advancement of Mankind, and saw in the growing pile of civilisation only a foolish heaping that must inevitably fall back on its makers in the end.' Accordingly, he sits again within his machine, and disappears with it. In doing so, however, he is not attesting an authorial fatalism about humanity, because Wells emphasises that the decline of mankind will be caused by that luxurious degradation of human initiative and intelligence - perhaps even a flight from responsibility - which is an inevitable consequence of the 'Advancement of Mankind' pursued with the intrinsic class and other divisions of his day accepted as necessary features of a 'progressive' perspective. So much for the satirical component of this novel(62); but Wells goes further. Carol Murphy writes of Fate or Providence as contradicting a purely humanistic description of the nature of human existence:

> Man can help to make the meaning of his own situation. But we cannot rest with a purely humanistic explanation. Man's situation has elements beyond his control which go to make up his own meaning. There is our own finitude, and beyond that the Fate - or Providence - which is beyond the reach of man's sin or virtue.
>
> 63.

Wells construced in The Time Machine a moral fantasy in which human

aspiration is our sole resource for challenging our finitude, and he linked it to an original, bleak perspective of human failure. The physical world - even time itself - acquires meaning and significance from human activity for there is no Fate or Providence imposed or issuing from any other entity or supernatural provenance; even chance can be accommodated as probability. Wells's recognition of the idea of individual choice, exemplified in the narrator's reluctance to accept all of the Time Traveller's revelations, preserves him from the charge of simple determinism. The individual seems still to have some freedom of will and of action, though the appalling prospect of the end of the world and the failure of our species to continue its upward evolution reduces the narrator's concluding resolve to 'live as though it were not so' to little more than an obdurate refusal to be overwhelmed by the inevitable. If Wells can be said to allow any hint of a saving grace it is in that simple resolve of the narrator not to surrender himself to fatalism. Indeed, in terms of the moral vision of The Time Machine, Wells's theme is that surrender, in the form of neglect, apathy, or abdication of self-determination, is the straight road to perdition for our kind.

> Wells - not surprisingly for a former student and admirer of T.H.Huxley - was a supreme rationalist and believer in science and the scientific method, a Francis Bacon reborn. And so for Wells, as for one of his Utopians in Men Like Gods, there was no way out of the cages of life but by knowledge - knowledge of man himself and of man in relation to the things about him.
>
> 64.

Hillegas is right to emphasise Wells's commitment to the scientific perspective for, as shown in the foregoing discussion, Wells was profoundly sceptical of supernal intervention in human evolution and destiny. Yet even had he valued scientific utility above all else as Hillegas suggests, it would still surely be inappropriate to overlook

the misgivings about pure materialism of the author of Moreau, misgivings as strong as ever three decades later in Men Like Gods. To do so is to overlook the important metaphysical dimension of Wells's vision.

Wells, an avowed evolutionist, believed that human development is a product of the creative, self-extending interaction between challenging necessity and rational intelligence. In early works, divine purpose is a religious delusion, and, more perilously, a self-delusion. This asservation of rational humanism is central to his view of human nature and purpose. Deformations to the individual sensibility and social order thrive in stagnation. Man may respond to the chilling indifference of the empty universe in two distinct ways (a third, apathy, is for Wells quite prior to consideration) - constructive engagement with the phenomenal world whatever it reveals or self-serving materialistic zeal. The latter only fosters obsessive confrontation with one's frustrations; but constructive engagement is progressive because it supports the hope of growth, even of a transcendental possibility akin to that promised by religion otherwise denied by the entropic teleological demise scientific rationalism foresees. These metaphysical contentions are explored in Men Like Gods, together with theosophical ideas like those Stapledon dramatises in Odd John. It is clear that for Wells the invigorating, enabling materialist outlook is the only humane principle. Yet it is the paradox of Progress that when the limit of human achievement is reached these formative interactions will cease and human development will reach a plateau stage which will precede a decline, a decadent degeneration probably imperceptible to those who experience it. Hillegas has linked Wells's apocalyptic vision to the prevailing

attitudes of contemporary society which he detested (65); but he also discerns the influence (T.H.Huxley's 'cosmic pessimism') of the evolutionary and cultural ideas of his mentor in the early romances like The Island of Doctor Moreau and The Time Machine:

> In Huxley's philosophy of evolution there is an element of grave doubt about the outcome of the cosmic or evolutionary process - his 'cosmic pessimism' - which exactly suited Wells's aesthetic and didactic purposes in the stories and scientific romances written in the 1890's. And it is this 'cosmic pessimism' which inspired the details in the scientific romances that are repeated in the works by Forster, Zamyatin, Huxley, Orwell and others that make these romances by Wells something like the first modern anti-utopias.
>
> 66.

As Hillegas has shown, these ideas - in some degree conveyed through the medium of Wells's fiction - have been enormously influential. Having established the sublime character of Wells's apocalyptic vision, we may may postpone further discussion of his teleological ideas and proceed to examine how his dualistic view of aspiration and his humanist principles are reflected in the 'anti-utopias' of some of the contemporaries and successors identified above.

An Inhumane Future: Utilitarian Ethics and Technological Servitude.

If Wells can be said to have presented in The Time Machine a bleak projection into a remote future of the consequences of human degeneration, Orwell did the same sort of thing(67) in the near-future setting of Nineteen Eighty-Four, arguably an even more pessimistic book because of its immediacy and author's conviction that totalitarianism was a genuinely possible outcome of history. The unattractive protagonist, Winston Smith, is provoked by his illicit desires (love, truth, liberty) into contravening the dictates of the Party, led by Big Brother, which rules Airstrip One of Oceania, the

totalitarian Britain in which Winston is an Ordinary Party member. Fear, betrayal, enforced conformity, and material deprivation affecting the lives of everyone except the Inner Party members like O'Brien are the means by which all are kept dedicated to the Party and B.B. Deviants are betrayed by their fellows, trapped by the Party like Smith, or self-incriminated through the ubiquitous telescreens:

> Orwell's satire gave shape to one of the familiar terrors of our time: the opportunity that technology provides for achieving the complete domination of human beings. The logic of the Party's desire for absolute power can only lead to the conquest of the world. Consequently the three super-states of Eurasia, Oceania, and Eastasia must be organized to wage a war without end, for the great advantage of war is that by using up the products of technology it most effectively keeps down the standard of living. In this way it is possible for the totalitarian state to maintain an unshakeable hold on its helot subjects.
>
> 68.

Correction, as Winston discovers at first hand, includes brain-washing and torture, the object being to secure from the offender a complete recognition of the necessity, and value, of Big Brother, and an abject self-abasement, for individualism and Ingsoc are mutually antagonistic. Since the State determines the truth - and alters it where necessary - logical thinking is considered subversive, and only after an admission of guilt or complicity is followed by successful re-education in Doublethink, the State's own system for reconciling apparent contradictions, can the restored individual be executed. Only when Winston admits to O'Brien that he truly loves B.B. and says that 'Two and two make five - and mean it', can O'Brien have him shot. True to the novel's premises, there is no escape for Winston.

Tragic though Winston's final abjuration of self is, the novel's pessimism is absolute because the totalitarian state is self-perpetuating and irreducible.

> In Nineteen Eighty-Four Orwell had created a myth for the epoch of Himmler and Beria. It is the story of a secular fall and the consequent expulsion from the promised paradise of everlasting progress. By means of memorable slogans - 'progress in our world will be progress towards more pain' - and by his ability to convey meaning through symbolic situations - Winston in the Ministry of Love - Orwell was able to present our world with the image of its fears. The real terror in the story, however, was that Orwell presented no hope of any redeemer. Man is completely and irrevocably a fallen creature.
>
> 69.

Aspiration, except in respect of becoming more involved in the Party, is subversive; and the ethical system is no more than a purely utilitarian code which the Party can alter at will. Surmounting all is the dark figure of B.B., a malevolent surrogate 'god'(70) who demands absolute faith and obedience. While it is clear that the Party comes to power because the people support it at first, when they are incapable of opposing it there is no foreseeable end to its dominion. As O'Brien puts it to Smith, 'If you want a picture of the future, imagine a boot stamping on a human face - forever.' Having once surrendered the right to make a decision for oneself to the Party,the prerogative can never be regained, because the single aim of the Party is the acquisition of even greater power.

Orwell's is an utterly uncompromising vision of a society in which expediency is given the form of moral imperative; as the fiction discussed in the following chapters shows, more orthodox didactic fiction also has a distinctive contribution to make to the arguments levelled against purely utilitarian 'Progress', albeit from a religious rather than sceptically humanistic point of view.

Nonetheless, the world of Nineteen Eighty-Four is surely among the most terrible of all possible visions of the future, as I.F.Clarke concludes: 'Orwell's projection of the seemingly inevitable into a certain future was an unconditional, and in the last

analysis, a nihilistic and despairing vision.'(71) To attain this grim determinism Orwell ignores the creative, beneficial side of human resourcefulness to show the direst consequences of allowing free rein to the destructive potential of human nature.

Yet Orwell's hell-on-earth has been criticised because of its very success in presenting a picture of the ultimate in totalitarian oppression. Raymond Williams has complained that 'Orwell goes further, cutting out the spring of hope. He projects an enormous apathy on all the oppressed: a created mood, if ever there was one. Eighty-five per cent of the population are seen as an apathetic mass, and proles, as a description of them, seems more than Party jargon. ...Of the many failures in Nineteen Eighty-Four this is perhaps the deepest. All the ordinary resources of personal life are written off as summarily as the proles.'(72) But surely this was the very effect Orwell wished to achieve. Reacting to the degradation and awful blood-letting of the war, and the monstrous posturing of fascism which had so effectively been transformed from rhetoric to dire actuality, he set out to project the mood of his times. The war seemed to confirm the sombre truth suggested by the previous "war to end all wars", that there was something pernicious hidden in human nature; and science expedited its emergence and fulfillment.

Whatever its inspiration, Orwell's austere novel conveys more than simple fatalism or pessimism. In depicting a situation without hope, without any redeeming features whatsoever, he shows how a totalitarian regime can systematically apply technology to the single end of oppression, so that the spirit of initiative and humanity can be crushed by supporting the inhumane logics of remorseless utility and pure expediency with the resources of science. It is doubly

effective as a cautionary projection because Orwell includes no secular deliverance or humanist affirmation; the malign surrogate god who rules Oceania cannot be subverted, and, as Winston's failure shows, apostasy is futile. The ethics of the society of 1984 are rigorously derived from perverse utilitarian values intended to benefit a tiny social group, the remote oppressors of the masses. They are the ethics of the abbatoir.

Some four years after American readers were presented with Orwell's novel as "Book of the Month," Kurt Vonnegut's first novel was published. Vonnegut deploys gimmickry and ironic wit in Player Piano, a novel which fairly crackles with narrative energy. Superficially at least, Vonnegut's book is quite different from Nineteen Eighty-Four, but both are remarkably similar in a number of major thematic and symbolic respects, and Player Piano undoubtedly belongs to the same dystopian genre as Orwell's novel.

Vonnegut's book is not evidently concerned with deprivation, and lacking the gloomy austerity of Orwell's scenario, it seems almost blithe by comparison. For all that Vonnegut is out to entertain (hence Player Piano seems the more readable, if slighter, of the two), it is obvious that he is no less intent on decrying the organised oppression of a centralised State. Both also work so well because their authors make full and highly effective use of the familiar dystopian device of showing how remorseless logic can be used to consolidate such a centralised power. Again, both are alike in presenting as inescapable the ironic situation in which humans have surrendered their autonomy so that they have become dependent upon that which efficiently oppresses them. Indisputably, in these respects the novels reflect the concerns and images of highly-

regarded predecessors such as Wells's When the Sleeper Wakes(1899 - 73); We (1924), by the Russian emigre Yevgeny Zamyatin; and Aldous Huxley's Brave New World (1932 - 74). Moreover, where Orwell depicts Britain in 1984 under the iron rule of Ingsoc and the Party, Vonnegut does the same for his native United States by seizing upon what was in many respects very much an American view of technology. With their markedly positivistic attitudes to scientific innovation already well known to generations of ordinary Americans including the growing popular readership of the science fiction pulp magazines, American corporate business empires were an apt choice for technocratic satire.

Yet, Vonnegut's novel ('brilliantly satiric,' declared Mark R. Hillegas(75), 'the best of all the science-fiction anti-utopias') explores human attitudes to life in a determinedly materialistic society with singular force because he is able to present it all with compelling, but detached, irony - his particular genius. This can be seen in his astute choice of the automatic player piano as a symbol of the extent to which human spontaneity and creativity have been supplanted with merely mechanical surrogacy; it is a most memorable image, evoking the self-serving aims of consumer society. Indeed, this is precisely what Kurt Vonnegut wants us to think about. For all the novel's consumer gimmickry ('radar', i.e., microwave cookers) and huge automated manufactories which sate the burgeoning appetites of contemporary America, Vonnegut's real aim is to bring us to a recognition of the system's more general shortcomings (grasped only rarely even by Wells) - principally, that people do not want to be merely passive consumers.

The story is set in the near future against a background of

global small-scale warfare persisting in the wake of World War III. Though America has emerged as more affluent than ever due to the automation of 'the Second Industrial Revolution', the impetus given to the economy by the war has been lost, so that the whole of the excess capacity of the American economy has been given over to domestic production. This marvel of social planning in its complex entirety is overseen and managed by a giant computer, EPICAC XIV. When, in Chapter Twelve, the visiting Shah of Bratpuhr is shown EPICAC, he asks it an ancient riddle which can only be solved by a redeeming messiah who will one day put an end to all human suffering. Incensed by the computer's failure to give any sort of response to the riddle he has voiced, the Shah hands down his contemptuous verdict on it - '"Baku!" This is a 'false god', Vonnegut explains disingenuously, made by the primitive tribesmen of Bratpuhr in their own image.

Vonnegut portrays America in the future as more like Stahlstadt than Frankville. The otherwise unemployed American masses are either enlisted for twenty-five years into the Army, or recruited into the Reconstruction and Reclamation Corps, which Vonnegut witheringly abbreviates into the 'Reeks and Wrecks.' Thus, the State seeks to maintain its control by regimenting these acutely frustrated men, so that their lives seem to have some purpose, however ephemeral or illusory. Appropriately for a society so dependent upon everything mechanical, sabotage is the equivalent of treason or sedition; the crime covers any damage to property or machinery. Finally, in one of the clearest parallels with Nineteen Eighty-Four, the State acts against its mavericks by reclassifying them, which effectively strips the transgressor of his privileges and livelihood, as Paul Proteus

discovers at first hand. Until one re-registers with the authorities, one becomes a sort of non-person, since the State accords its people everything, even the acknowledgement of their existence:

> He didn't have to be anywhere at any time any more - ever, he supposed. He made up his own reasons for going somewhere, or he went without reasons. Nobody had anything for him to do anywhere. The economy was no longer interested. His card was of interest now only to the police machines, who regarded him the instant his card was introduced, with instinctive distrust.
>
> Player Piano, Chapter 27; p.226.

In strictly material terms, 'We've never had it so good,' could have been the catchphrase of this consumerist earthly paradise, but '"Give the friggin' worl' back to the friggin' people,"' is the more evocative expression Vonnegut actually attributes to the disgruntled lumpenproletariat of his satire. Their industrialist masters(76) ensure that the output of the factories is maintained - indeed, increased - so that their prestige and power in the land is preserved. Preferring not to see themselves as conservatives, with their institutionalised outlook a mainstay of the corporate state which in turn maintains and rewards their dedication, they like to think of themselves as progressives, selflessly working for the common good:

> Kroner turned his back to Paul, assumed a ready stance with the shotgun, and picked off an imaginary bird flushed from behind the desk. "Kaplowie!" He ejected an imaginary shell. "These are dangerous times - more dangerous than you'd suspect from the surface. Kaplowie! But it's also the Golden Age, isn't it, Paul?"
>
> Paul nodded.
>
> Kroner turned to look at him. "I said, isn't this the Golden Age?"
>
> "Yessir, I nodded."
>
> "Pull!" said Kroner, apparently imagining clay pigeons now. "Kaboom! There have always been doubters, criers of doom, stoppers of progress."
>
> "Yessir. About Finnerty and the pistol, I - "
>
> "Behind us now, forgotten," said Kroner impatiently. "The slate is clean. As I was about to say, look where we are now, because men went right ahead and took forward steps with stout hearts, in spite of the people telling them not to."

"Yessir."

"Kaplowie! some men try to make light of what we're doing, what men like your father did, by saying it's just gadgeteering, blind tinkering. It's more than that, Paul."

Paul leaned forward, eager to hear what this extra quality might be. He'd felt for some time that everyone else in the system must be seeing something that he was missing. Perhaps this was it, perhaps the beginning of an overwhelming fervor like his father's.

"It's a sight more than gadgeteering, I'll tell you, Paul."

"Yessir?"

"It's strength and faith and determination. Our job is to open new doors at the head of the procession of civilization. That's what the engineer, the manager does. There is no higher calling."

Dejectedly, Paul let his spine sag back in the chair.

Player Piano, Chapter 12; p.114

For all their vaunted benevolence, Kroner and his privileged fellows are far from being selfless: 'Player Piano depicts an automated twenty-first century America controlled by a hierarchy of technical and managerial Babbits, arrogant, stale and humorless, leading affluent, segregated, near-pointless lives....even for the elite in their comfortable suburbs, automated America is a jungle of toadyism, backbiting, childish sloganeering, executive meetings, and fear of being automated into the dump of the superfluous.'(77) Since they are really running America to suit themselves, their aims and purposes are more like those of Faustus than Prometheus.

What lies beneath the apparent calm of the society run by the managers and engineers is a growing underground movement comprised of many secret societies working together to overthrow the system which oppresses them. These societies, such as the Ghost Shirt Society, are formed initially for fellowship and to create a collective sense of purpose, but they inevitably become focal points of a rising groundswell of popular resentment. The pent-up hatred of the system which has deprived the conspirators of meaningful work is destined to explode in a nation-wide orgy of Luddite destruction, but the

managers have one last chance to avert it. After the State has declared him an outlaw in another of Vonnegut's biting ironies, Paul Proteus, the disillusioned manager of the Ilium Works, infiltrates the Ghost Shirt Society. But Proteus remains uncommitted to their cause until he is arrested after a police raid. Sick of Kroner's cynical manoeuvres, Paul at last takes a stand and declares for the Ghost Shirts.

As the revolution gathers momentum, Paul is sprung from his televised showcase trial to witness the destructive culmination of the efforts of the secret societies. The son of the founder of the Ilium Works, Paul's value to the rebels has already been discerned by one of the more colourful ringleaders of the conspiracy, the Rev. James J. Lasher:

> "In the past, in a situation like this, if Messiahs showed up with credible, dramatic messages of hope, they often set off powerful physical and spiritual revolutions in the face of terrific odds. If a Messiah shows up now with a good, solid, startling message, and if he keeps out of the hands of the police, he can set off a revolution - maybe one big enough to take the world away from the machines, Doctor, and give it back to the people."
>
> Player Piano, Chapter 29; p.246.

However, just when they have won the initiative, the rebels throw it away. The leaders of the revolt in Ilium have resolved to sit out the blockade imposed by the authorities, with the aim of returning Ilium to an exemplary Utopia in which the balance between Man and Nature is restored in an ideal agrarian paradise, replete with fulfilling tasks and achievements. But ironically, they give up their half-formed plans having witnessed a fundamental truth about human nature being unconsciously revealed by a group of rebels (led by the compulsive amateur designer Bud Calhoun) innocently trying to repair one of the vending machines they have themselves destroyed. To Proteus and the

other leaders, Bud's attempt to salvage a working machine from the wreckage manifests that very desire for technological tinkering which had brought the machine civilization into being. In a sense, this gift for creative adaptation, so fundamentally a part of human nature as to seem almost an instinctive response to the world, is at once the saving grace and the fatal flaw of mankind. For after all, the hated machines are our own creations, and it is Mankind's desire for comfort and luxuries which may result in this enfeeblement, which is the outcome of our over-dependence on machines. The rational, planned society of a modern 'Golden Age' is presented in this, as in many other equally humanist novels (among them Olaf Stapledon's earlier Star Maker, discussed in the next chapter), as being subtly pernicious and, paradoxically, damaging to human nature. Its imputed immorality is born of its tendency to distort human relationships and weaken or repress human aspiration; not least because of its soullessness, it is countered in the science fiction of aspiration by humanistic apostasy, a liberal subversive impulse.

REFERENCES and FOOTNOTES

1. Lucian was a second-century Syrian philosopher whose Icaromenippus was an account of a journey to the Moon in which the voyager reaches his destination having solved for himself the matter of the design of his conveyance. (In another such tale, his True History, Lucian's traveller had found himself accidentally transported to the Moon; some see this as a crucial distinction, the Icaromenippus being regarded as "scientific" rather than "providential", as I suppose this could be put.)

   Aeschylus's drama, as it stands, is out of contention for this distinction if one requires of science fiction that it be in some obvious way concerned with science, the scientist, and the scientific sensibility, or the consequences thereof for the rest of us. While I prefer to keep these in view, I would not exclude, generally speaking, any text which is in some way related to science or technology, and in which the scientific element of the story has a convincing measure of self-consistency. I do also find science fiction of the nineteenth and the present centuries more absorbing, as a rule, than that of earlier times.

2. J.O.BAILEY, Pilgrims through Space and Time: Trends and Patterns in Scientific and Utopian Fiction, Argus Books, Inc., New York, 1947; pp.35-36.

3. James GUNN, The Road to Science Fiction, Vol.I; New American Library, New York, 1977; p.162.

4. Jack WILLIAMSON, writing in 1974 towards the end of a schismatic, protracted struggle between the (mainly) young standard bearers the New Wave (Ellison, Merril, Ballard, Aldiss, Delany, et al) and the conservative voices of science fiction such as the magazine editors like Campbell who had exercised such tremendous influence in the 1950's and for much of the 1960's, summed up his view of the contemporary issues as follows:

   > The history-minded critic can trace the cultural split we have seen in current science fiction back at least to the Renaissance, when modern science was born. Once upon a time - so the story goes - man lived at the centre of a simple world, one created for his own comfort and and maybe to test his fitness for heaven. Materially, by today's measures, he was disadvantaged. Spiritually, he wore the image of God. Shakespeare and John Donne were among the last literate inhabitants of that good world, before satanic science divided it into a sphere of knowledge and a sphere of faith. The two spheres are Snow's two cultures, still at war.
   >
   > 'Science Fiction, Teaching and Criticism,'
   > from: Science Fiction, Today and Tomorrow,
   > ed. R.BRETNOR; Harper & Row, New York, 1974; p.328.

5. H.Bruce FRANKLIN, Future Perfect: American Science Fiction of the Nineteenth Century; Oxford University Press, New York; Revised Edition, 1978; pp.116-117.

6. Brian ALDISS, Billion Year Spree: The History of Science Fiction; Weidenfield and Nicolson, London, 1973; p.52.

Still, Aldiss is surprisingly reluctant to number Poe among the predecessors of modern science fiction writers, arguing that, 'those stories which are most like science fiction are least like stories, more resembling essays or conversations, and often tumbling into the facetious....as if he found his material intractable;' and, 'There are excellent stories which are kin to science fiction...;' having acknowledged that, 'Certainly Poe was interested in science, in the future of science, and in the effects of science on society.' Aldiss's reluctance seems somehow qualitative; he argues that 'Poe's best stories are not science fiction, nor his science fiction stories his best.' On the other hand, he is happy to entertain the idea that Milton's Paradise Lost may include science-fictional elements: '...Paradise Lost, Book II, with Satan crossing that vast vacuity between his world and ours, looks suspiciously like the pure quill!'(p.10). Since Milton's deep and abiding interest in science has not been recorded, Aldiss's equivocation about Poe's fiction seems to smack of the double standard.

In Trillion Year Spree(1986), Aldiss again closes on 'intractable' Poe in an attempt to establish Poe as a writer who straddles an indefinite generic boundary which lies between two conceptual zones of Gothic, and modern scientific fiction, noting that Poe 'was no subscriber to scientism'(p.58) (but then, neither are many contemporary writers whose post-modernist fictions might be considered 'the pure quill,' Doris Lessing, for example) and, having examined the 'failure and success' of The Narrative of Arthur Gordon Pym of Nantucket, concludes that, 'Poe pre-empted a science fictional content, particularly its transcendental content, yet mishandled its form, owing to perverse qualities in his own temperament. Far from being the Father of Science Fiction, this genius bodged it when he confronted its themes directly. Yet he brought off some of its best effects, more or less when looking the other way.'(p.63) Perhaps Aldiss here compounds the double standard with the subjectivity of hindsight.

Poe certainly succeeded in creating a plausible tale, as Harold BEAVER records in his Commentary on 'The Facts in the Case of M. Valdemar' for the Penguin Books' 1976 edition of The Science Fiction of Edgar Allan Poe:

> So generally was "M.Valdemar" accepted as a scientific description of a real event that Poe had eventually to fend off fan letters with "the facts". "'Hoax' is precisely the word suited to M.Valdemar's case," he replied to a Scots admirer from Stonehaven. "Some few persons believe it - but I do not - and don't you." (30 December 1846). "'The Valdemar Case' was a hoax, of course," he informed a young medical student from Brunswick, Maine(11 March 1847).
>
> (Beaver, op.cit., p.394)

7. P.B. MEDAWAR, Advice to a Young Scientist; Harper & Row, New York, 1979; p.71.

8. See Franklin, op.cit., 'Edgar Allan Poe and Science Fiction .'

9. Franklin, ibid., p.131.
Incidentally, this later story shows that Poe was aware of the limitations of both the Baconian and the Aristotelian scientific approach:

> Do you know that it is not more than a thousand years ago since the metaphysicians consented to relieve the people of the singular fancy that there existed but two possible roads for the attainment of Truth!
> .... Aries Tottle...introduced...what was termed the deductive or a priori mode of investigation. .....
> Aries Tottle's mode, in a word, was based on noumena; Hog's on phenomena. .....
> The savans now maintained that the Aristotelian and Baconian roads were the sole possible avenues to knowledge.
> 'Mellonta Tauta', FRANKLIN, ibid., p.127-128.

Of course Poe himself preferred to see science as a sort of visionary endeavour, and his 1829 poem "To Science" suggests how impatiently he looked upon the deplorable advance of Cartesian rationality, as he thought of it, and the mortifying mechanisms of contemporary science and technology.

To Science

Science! true daughter of Old Time thou art!
Who alterest all things with thy peering eyes.
Why preyest thou thus upon the poet's heart,
Vulture, whose wings are dull realities?
How should he love thee? or how deem thee wise,
Who wouldst not leave him in his wandering
To seek for treasure in the jewelled skies,
Albeit he soared with an undaunted wing?
Hast thou not dragged Diana from her car?
And driven the Hamadryad from the wood
To seek a shelter in some happier star?
Hast thou not torn the Naiad from her flood,
The elfin from the green grass, and from me
The summer dream from beneath the tamarind tree?

The poem is like nothing so much as a fanciful, lengthy list of indictments in which science is charged with having rapaciously deprived the poetic imagination of some of its most charming imagery. Incidentally it also suggests how thoroughly science had by then eclipsed magic as a source of wonder amongst many of his contemporaries, though he affects horror at this. Nonetheless, his fiction exploits the potential of science for creating visionary tales or horrid fantasies with consummate skill to meet a popular taste which is at least as strong today as it was in his heyday.

Intriguingly, perhaps what Poe longs for so plaintively in his sonnet is now recognised in some scientific quarters as the "Kantian" scientific outlook. This intuitive approach posits forces and effects which exist somehow in tandem with the mechanistic forces manifestly at work in our surroundings.

> 'This experiment succeeds as well as could be desired,' Kant complacently remarked, and it led him to formulate his well-known opinion that a priori knowledge - knowledge independent of all experience - can exist; he reasoned that both space and time are forms of sensory intuition and as such are only 'conditions of the existence of things as appearances.'
>
> P.B.Medawar, op.cit., p.74.

Prof.Sir Geoffrey Warnock, discussing Kant's philosophy with Bryan Magee (in one of a series of dialogues published as The Great Philosophers, BBC Books, 1987), makes this point more clearly:

> ...by making clear the distinction between the world as appearance, as an object of experience, and the world of things-in-themselves, he is in a position to say that, on the one hand, there is the world of appearances, and the physical sciences in principle give us the whole truth about that - as he believed that they did. He had no doubt that Newton had got it absolutely right, and that a physicist's description of the world as an object of possible experience was essentially correct and could be exhastive. But, he says, bear in mind that we are there talking of the world of appearances. There is also, on the other hand, the topic of things in themselves, and there is room there, so to speak, for other sorts of concepts altogether: of free will, of rational agency, right and wrong, good and bad, the soul - there is room for these concepts....outside the world of appearance. Of course he saw that, on his own principles, he would have to say that these other matters couldn't be topics of knowledge. Had you said to him: 'Do you know that there is such a thing as free will?' he would consistently have said: 'No, I do not know any such thing. All I know is that there is room for that possibility.' He claims no more.
>
> Op.cit., pp.182-3

Kant's philosophy would have attracted Poe's interest because while it is conspicuously logical, it admits of other concepts and possibilities which cannot be physically delineated. Ultimately Poe's disaffection with science follows from his conviction that science was forcing human sensibility into accepting ever more narrow, materialistic rather than metaphysical perspectives.

10. Beaver, op.cit., p.xiv.

11. While noting the gimcrack style of 'Mellonta Tauta,' Bailey contrasts Poe's extrapolative futurism with the rusticated utopias of Thoreau and Emerson:

> Edgar Allan Poe was likewise a maverick, at least in his attitude toward the back-to-nature movement in New England. He frequently designed more than he executed, publishing fragments not fully worked out. His 'Mellonta Tauta'(1849) seems to be such a fragment. It is partly satire, partly historical romance of the future, and partly an array of advanced machines for an instrumental utopia.
>
> Pilgrims Through Space and Time, p.50.

However, Beaver (op.cit., p.417) offers a more compelling view of the story, seeing it not as an "instrumental utopia" with Bailey but rather as a frantic, totalitarian dystopia where machines and and the seething population dominate life:

> His future is totalitarian and overcrowded. The key is population control. Men as individuals are abandoned; epidemics and wars, welcomed. The sea swarms with ships; the very sky, with balloons. At hundreds of miles per hour hundreds speed by on an aimless excursion cruise. Poe's millenial "Amricca"(am rich, am rich, am rich) is his final send-up - a Fool's day calculus of suicidal, doomsday collapse.

12. Franklin, ibid., p.99

13. V.S.PRITCHETT, 'The Scientific Romances'; in H.G.Wells: A Collection of Critical Essays, ed. by Bernard BERGONZI for Prentice-Hall Inc., New Jersey; 1976; p.33.

14. In his Science Fiction, Its Criticism and Teaching (Methuen & Co., London; 1980), Patrick PARRINDER writes on the subject of Wells's rigorous and consistent development of a single fantastic premise, taking his cue from Wells's oft-quoted 1933 discussion of his 'scientific romances':

> In his account of these works he contrasts the purely speculative nature of the hypotheses on which they are based with the rigour with which he pursues the consequences of these hypotheses. The initial premise requires of the reader no more than the willing suspension of disbelief; as the narrator of The Time Machine says to his hearers, 'Take it as a lie - or a prophecy. Say I dreamed it in the workshop.' Though backed up by a display of scientific patter, the premise...is comparable to the traditional marvels of magic and fairy tale.
>
> Parrinder. op.cit., p.11;
> 'Logical speculation: H.G.Wells'.

Wells projects himself as a sort of logical, cognitive fantasist, contrasting himself in this respect to the more anticipatory, extrapolative vision of Verne. Few would see this as an important

distinction nowadays, though, not least because some of Verne's flamboyant guesses - seen with the privilege of hindsight - seem the more fantastic. However, this may lead us to overlook the perhaps unusual care Wells took in establishing his initial premise in The Island Of Doctor Moreau (see also 22, below). While it would be foolish to neglect Wells's own description of many of his initial premises as "magic tricks",

> 'As soon as the magic trick has been done the whole business of the fantasy writer is to keep everything else human and real. '

Wells's science fiction is, as its author intended, impressively self-consistent, so much so that Hugo Gernsback, who hoped his his new 'scientifiction' magazine Amazing Stories would help to popularise science in an entertaining way, counted Wells among three writers whose work he would use (the others were Poe, the American; and, Verne the French writer of inspiring epics of man and machine.) (Gunn, op.cit., pp.382-383).

Damon KNIGHT questioned the point of the partisan debate which raged for decades in the editorial and letter columns of the popular American science fiction pulp magazines and elsewhere about the nature of "true" or "pure" science fiction, as distinct from science fantasy:

> Heinlein is one of those who draw a firm line between science fiction and fantasy; they are, as he says in his introduction (to Tomorrow, The Stars) 'as different as Karl Marx and Groucho Marx.' It's a pleasure to be able to disagree, for once, with a writer I admire so strenuously. Heinlein goes on:
>
> > Fantasy is constructed either by denying the real world in toto or at least by making a prime basis of the story one or more admittedly false premises - fairies, talking mules, trips through a looking glass, vampires, seacoast Bohemia, Mickey Mouse. But science fiction, no matter how fantastic its contents may seem, always accepts all of the real world and the entire body of human knowlege concerning the real world as the framework for the fictional speculation.
>
> Granting that the aims of "pure" fantasy and "pure" science fiction differ, are they two rigid compartments, or only the ends of a continuous spectrum?
>
> In Search of Wonder, Advent Publishers, Chicago, 1967; p.117.

Clearly Wells benefitted from his preoccupation with the cognitive ethic even in structuring his fiction(see below,17&22). However, it may be stretching the point to suggest that:

> Similarly, H.G.Wells's 'romances' express a scientific philosophy, and their narrative framework is underpinned by a direct intellectual appeal to the reader, rather than by psychological allegory and symbolism. Their affinities are as much with the satire and the realistic novel as with the romance proper.
>
> Parrinder, op.cit., p.10.

It is hard to recall any fiction which is as empty of symbolism or as free of any kind of allegory as this suggests, since these often are there inherently in the relationships between characters, or between them and the conventions of society (as in The Island of Doctor Moreau) or present as themes, whether consciously or not.

James Blish (who also published criticism under the pen-name of William Atheling Jr.) placed Wells and Verne in a broader literary perspective:

> In the nineteenth century, virtually every writer of stature, and many now forgotten, wrote at least one science fiction story. .....
>
> Jules Verne, in short, was just plain wrong in assuming he had invented a wholly new kind of story. It had been in existence for decades; indeed, it was almost commonplace, and widely accepted. ...By about 1860, the science fiction story was a fully formed and highly visible literary phenomenon in English; Verne was merely the first author working in the form of another language to catch the public eye.
>
> These writers did not call what they did 'science fiction,' or think of it as such; the term was not invented until 1929. When H.G.Wells published his early samples of it in the 1890's - and in the process showed that such pieces could also be works of art - he first called them 'fantastic and imaginative romances,' and later, 'science fantasy' (a term which has now been degraded to cover a subtype of it in which the science content is minimal, and what little of it is present is mostly wrong.) Most of its producers never bothered to give it a label, nor did editors feel the lack; it was considered to be a normal and legitimate interest for any writer and reader of fiction.

'The Tale that Wags the God: The Function of Science Fiction,' American Libraries, 1970; p.1029.

15. Bailey comments:

> By 1871 science had begun to fulfill some of its promises; the earlier agonies of industrialisation were passing, the burst of inventions, such as those of Edison in the last quarter of the nineteenth century, showed the Machine Age on the horizon; and the theory of evolution suggested not only an ancient past, but a limitless future, in which there might be racial self-direction.

(op.cit., p.50)

16. Gunn, for example, sums up Wells's contribution thus:

> By his techniques and by the number and excitement of his ideas, Wells broadened the audience for science fiction, just as Verne had done before him. Wells, with his critical mind and his superior writing skills, carried science fiction to heights it had never reached before and would seldom afterward.

(Gunn, op.cit., p.382)

17. Pritchett, op.cit., p.37.

18. Pritchett, ibid., p.36.

19. Wells wrote in his 1933 Preface to his science fiction:

> They are all fantasies; they do not aim to project a serious possibility; they aim indeed only at the same amount of conviction as one gets in a good gripping dream. They have to hold the reader to the end by art and illusion and not by proof and argument, and when he closes the cover and reflects he wakes up to their impossibility.

With the telling end of The Island of Doctor Moreau in mind, of which Aldiss wrote,

> The ending has a sombre strength. As with the climax of The War of the Worlds, it comes not just as a surprise but as a logical culmination. Wells has subtly prepared us for it, so that it is revelation rather than punch line.... (op.cit., p.141)

this strikes one as a singularly odd disclaimer, not least because Aldiss is surely right in speaking of the 'logical culmination' of this novel. The truth, it seems to me, whatever were Wells's hidden pretensions to a particular sort of talent attested by the 'arts and illusions' of the whole canon of his science fiction, is that after the initial premise is accepted by the reader, the themes are developed, and illustrated, by 'proof and argument,' however imaginatively dressed up or highly coloured these might have been.

20. I have used an anthology of the scientific romances, H.G.Wells, published by William Heinemann, London, which includes the 1933 Preface quoted above.

21. The scrupulous attention to detail and factually expository style of Moreau's description of his modus operandi contrast markedly with Wells's own 1933 description of Frankenstein's 'magical' animation of his creature:

> Frankenstein even, used some jiggery-pokery magic to animate his artificial monster. There was trouble about the thing's soul. But by the end of the last century it had become difficult to squeeze even a momentary belief out of magic any longer. It occurred to me that instead of the usual interview with the devil or a magician*, an ingenious use of scientific patter might with advantage be substituted. That was no discovery.

All this is further reason to be cautious about Wells's remarks in his essay, given the almost textbook clarity and detail of the 'scientific patter' of Chapter 14. Robert M.PHILMUS concurs:

> The statements that H.G.Wells gave out in the twenties and thirties about his early "scientific romances" or "scientific

fantasies," as he alternately called them, are not sympathetic to the spirit of these works, the best of which he had written before the turn of the century. In general, he makes them out to be slighter in substance and tendentious in tone than the serious reader coming upon them now is prepared to find them.

'The Logic of Prophecy in The Time Machine'
in H.G.Wells, A Collection of Critical Essays,
ed. BERGONZI; (op.cit.) p.56.

*Something which Wells should have known doesn't figure in Frankenstein. Kingsley AMIS did see through what I can't help but think of as Mary Shelley's 'alchemical patter':

The notable thing about Frankenstein the character is that, far from being possessed of supernatural powers, he is a physiologist with academic training...

'Starting Points'
in Science Fiction: A Collection of Critical Essays,
ed. Mark ROSE; Prentice-Hall, Inc., New Jersey, 1976; p.22.

Even so, Brian ALDISS can still find ample evidence in The Island of Doctor Moreau to support his contentions about the importance of 'the sublime' in modern science fiction:

...Moreau's science is only vaguely touched on; the whole business of brain surgery, on which the novel hinges, has none of Wells's usual clarity. We can infer that he wanted to leave this area sketchy, so that we know no more know about what goes on in Moreau's laboratory than in God's. vagueness, by increasing our horror and uncertainty, is a strength rather than otherwise.

Trillion Year Spree, p.125

22. J.Norman KING, 'Theology, Science Fiction and Man's Future Orientation;' in Many Futures, Many Worlds (pp.237-259), ed. Thomas D.Clareson; Kent State University Press, 1977; pp.242-243.

23. Harry LEVIN, Christopher Marlowe, The Overreacher; Faber & Faber, London, 1954; p.140.

24. Pritchett, op.cit., pp.32-33.

25. Brian ALDISS observes blithely that:

Nobody has quite decided what Moreau is, apart from being a splendid and terrifying story. But it is clear that Wells has something more in mind, something larger, than a thrilling adventure.

Billion Year Spree, p.138
Trillion Year Spree, p.124

and goes on to claim, 'Yet it is not difficult to see what he intended...(p.124) It is clear that Moreau, at least in one sense, speaks against transplant surgery(p.125);' one feels able to offer one's own conjectures about the moral nature of

the book and how this is conveyed structurally in terms of the respective scientific sensibilities of Moreau and Prendick, which therefore does not rely on divine ordinance quite as much as Aldiss's reading of Moreau, in which it is nonetheless correctly linked with Frankenstein: 'Moreau is intended to stand for God. Moreau is a nineteenth-century God - Mary Shelley's protagonist in his maturity - Frankenstein Unbound.' Ibid.

26. As one of his biographers, Montgomery BELGION, noted:

> ...It is in that year (1884) that he seems to have formed an unbounded belief in the potentialities of science. That is presumably what led him later on to call for all power and control in the world to be vested in scientists.
>
> H.G.Wells,
> Longmans, Green & Co., London, 1953; pp.25-26.

It may be helpful at this stage to clarify what we may take the idea of what a scientist is and does - as distinct from the diverse varieties of outlook and motivation already discerned (Aristotelian, Baconian, Kantian and so on) - while on the subject of Wells's depiction of the modern scientist. Wells, while undoubtedly a scientific enthusiast, did not particularly promote the later, distinctively American popular view of the scientist-as-hero fostered by Campbell's influential 'pulp' school of writing in succession to Gernsback. It is true that in his later extrapolative future histories he does create scientific oligarchies - the Airmen, the Samurai, etc., but they are advanced not as impulsive or obsessive heroes but as a - transitory - class of idealistic social engineers, an elite of supreme scientific materialists who can disabuse us of our dangerous social, religious and other illusions in time to save us from ourselves, protect our birthright and preserve our special potential. Yet, he also portrayed scientists in a fair range of contexts as individuals susceptible to the usual weakness and everyday clumsiness of ordinary people - one thinks of the scientists of The War of the Worlds ingenuously trying to investigate the crashed Martian projectiles and their fell cargo; or the original absent-minded professors, Mr.Bensington and Prof. Redwood, whose extraordinary discovery quite overwhelms their ability to control it. For Wells, scientists as a collectivity are - usually - eminently trustworthy and humane; but as individuals, have the same potential to be selfish, deranged or obsessive as anyone. However, for a concise, lucid description of the activities of the professional scientist, I should like to turn to that offered in his last work, Literature and Science(1963), by Aldous Huxley. Huxley draws a very clear distinction between the 'idiographic' concerns of literature and the 'nomothetic' activities of scientists, based on a most perceptive awareness of both literary and scientific disciplines:

> As a private individual, the scientist inhabits the many-faceted world in which the rest of the human race does its living and dying. But as a professional chemist, say

a professional physicist or physiologist, he is the inhabitant of a radically different universe - not the universe of given appearances, but the world of inferred fine structures, not the experienced world of unique events and diverse qualities, but the world of quantified regularities. Knowledge is power and, by a seeming paradox, it is through their knowledge of what happens in this unexperienced world of abstractions and inferences that scientists and technologists have acquired their enormous and growing power to control, direct and modify the world of manifold appearances in which human beings are privileged and condemned to live.

Op.cit., p.11.

27. Prendick is certainly not there for us to identify with, any more than the Invisible Man is. His shallowness, his lack of understanding for Montgomery, his lack of sympathy for the Beasts, is perhaps a mark against the book - the darkness of any painting can be enhanced by a highlight here and there. Or perhaps it is just that Prendick is a commonplace little man, as Gulliver was a commonplace little man and Alice a commonplace little girl.

Brian Aldiss, Billion Year Spree, pp.140-141.

28. W.W.ROBSON believes (Modern English Literature, Oxford University Press, 1970; pp.8-9) that Wells was motivated by a strongly-felt sense of 'impatience' with traditional English gentility, past and present:

> The driving-force in his thought was the dislike of the English governing class. He grew up when thinkers like Darwin and Marx were altering the whole outlook of educated men. But their ideas made little impact on the traditional humanism of the English upper class. All his life Wells was impatient with the old classical education. This, he kept reiterating, was the age of science.

29. Aldiss, op.cit., p.137.

30. ...Wells's main effort in his early work was frankly directed towards commercial success. He achieved it because he wrote on a topical subject: the practical applications of science.

Robson, op.cit., p.9.

31. Gunn, 'Science Fiction and the Mainstream'; in Bretnor, op.cit., p.191.

32. So much so that Bailey saw him as in some ways Wells's successor:

> The successor to H.G.Wells in the disciplined use of science for romance is Dr. Olaf Stapledon, lecturer in Liverpool University, England, on literature, industrial history, psychology, and philosophy, and author of various books on philosophical and ethical topics. Stapledon's romances deal not only with evolution, but with the new space-time revealed in twentieth-century mathematics and

astronomy. His scientific imaginations are carefully worked out, but it is clear that he is not interested in them alone. He is interested with the philosophic meaning that is expressed in them.
Bailey, op.cit., p.138.

As Bailey doubtless knew, they were in fact contemporaries, Wells dying in 1946 aged 80, and Stapledon in 1950, aged 64. Though his view seems odd, especially since Wells continued his literary activity until as late as 1945, many critics concur with Bailey in regarding the early 'scientific romances' as amongst his finest work, the later work being characterised by an increasingly didactic, hortatory tone - at the expense of the energy of the early 'scientific romances' and the comic protagonists of his 'mainstream' fiction. Thus Robson:

From The New Machiavelli onwards there is little but a documentary interest in Wells's fiction. His books discuss politics, education, and (in and out of season) free love. But it is all discussion. .... The truth is that Wells's heart was not in fiction.
Robson, op.cit.,p.11.

For Brian Aldiss, an unabashed admirer who decribes Wells as 'the Prospero of all the brave new worlds of the mind, and the Shakespeare of science fiction' (Trillion Year Spree, p.133), this emphatic re-orientation of Wells's work is explicable in terms in of his prominence as an international public figure, which he sought to exploit in order to promote the realization of his own visionary idealism:

During the thirties, Wells the novelist faded out before Wells the World Figure. He was a famous man, busily planning a better world, chatting with Gorki, feuding with George Bernard Shaw, flying to the White House to talk to Roosevelt, or to the Kremlin to talk to Stalin. Remembering the muddle of the London of his youth, he visualized a World State as the tidiest possible way of governing mankind for its own happiness. Trillion Year Spree, p.129.

Having noted that, after The World Set Free(1914), 'his books are no longer novels but gospels,' Aldiss reminds us that, 'It was Wells who said, "Human history becomes more and more a race between education and catastrophe."'(p.132)

33. Although nine years separate these novels, there are very strong resemblances between them, as Curtis C.SMITH observes:

The similarities between Odd John and Sirius are apparent. Sirius, a dog with intelligence at a human level, is as estranged from humanity as is John. In each book Stapledon uses estrangement for satirical purposes. ...both John and Sirius are misanthropes. Stapledon gives no way of evaluating John's misanthropy, no reliable critique of it...
from: 'Olaf Stapledon's Dispassionate Objectivity' in, Voices for the Future, Vol.I, ed. T.CLARESON; Bowling Green Univ. Popular Press, Ohio, 1976; p.59.

34. While the authorial concerns of Odd John are in many respects readily accessible (even explicit) in the text, critics have come to see Stapledon's attitude towards his story differently. Aldiss thought it 'a pleasant superman tale.....the mood of the of the book is light and cheerful.'* (op.cit., pp.235-236); while Scott saw it as a short satiric tragedy, perhaps 'a monster story,' perhaps something else - his honest difficulty arising from what he perceived to be the lack of an obvious, unifying authorial moral perspective(op.cit., passim). J.O.Bailey also took the novel more guardedly than Aldiss, and on the whole I am more inclined to follow Scott and Bailey:

> No summary can do justice to Odd John....Stapledon's subtitle reads, 'A Story between Jest and Earnest.' The story, let us say, is a jest; but the attempt is earnest enough of grapple with the problem of human inadequacy and to show that the wisest and most spiritually intuitive in human thought is everywhere impeded by the worst and finally overwhelmed.
>
> (op.cit., p.170.)

My only quibble with Bailey is that he refers, perhaps confusingly, to 'human thought' in making a remark which seems meant to be read in terms of John's 'superhuman' outlook.

*Unchanged in Trillion Year Spree.

Stapledon engages in a kind of cognitive game with determinism throughout the novel, and his mock-ironic attitude towards this and other aspects of Odd John, particularly the relationship between John and the narrator (so self-effacing that very little is revealed about him anywhere in the novel), betray his drollery.

35. James GUNN reports that the book was 'acclaimed the definitive treatment of the superman theme' (op.cit., p.199) by contemporary readers).

36. Meredith CARY writes of Odd John:

> Science fiction would seem willing to restore to us even the love of God. ...the glory of a happier time when God walked the world at large among His creatures is recalled when science fiction offers homo sapiens the daily personal contact enjoyed by a faithful dog with a mentally inaccessible but tenderly patronising homo superior. For example, Olaf Stapledon's Odd John is unmistakably such a god. Almost before he has entered his teens, Odd John has understood and belittled all the proudest works of 'homo sap.' from philosophy to finance. Yet he is in his own way a fulfillingly accessible god for whose companionship his chosen 'Fido' can gladly sacrifice career, girl friend, and pregnant wife.
>
> 'Faustus Now', in Hartford Studies in Literature, Vol. 4 (1979); p.169.

While recognising that Cary was engaged in a more general discussion of science fiction than is indicated above, I have to take issue with the idea of Odd John as a benevolent deity which is introduced in the context of the relationship between John and his biographer. Undoubtedly John has a 'soft spot' for 'Fido', but his attitude to the rest of humanity is quite unsentimental, and the relationship with the biographer is wholly untypical. I confess I can see little fulfilment in waiting hand and foot upon such an arrogant being as John can be, but Cary is right in suggesting that science fiction has more attractive, beneficient messiahs, Michael Valentine Smith of Stranger in a Strange Land perhaps being one such.

37. Recent science fiction has spawned many secular messiahs, some benevolent, others not; some of the more well-known of both kinds are, for instance, Karl Gogauer of Behold the Man; Ransom of That Hideous Strength; Bowman of 2001:A Space Odyssey; Paul Atriedes of Dune; and Charteris of Barefoot in the Head.

38. While I can cite Messrs. Scholes and Rabkin for this (op.cit., p.33), another key to this view of the novel is the authorial remoteness which Stapledon adopted. Were he too concerned, after all, with explicitly didactic moralising the almost capricious note his style possess, and which I believe rather deceived Aldiss(see 34, above), would surely have been impossible to sustain.

39. ...Delicate experiments were being carried out on the germ cells of molluscs, fishes and specially imported mammals. Still more difficult work was in progress upon human ova and spermatazoa, both normal and supernormal. I was shown a series of thirty-eight living embryos, each in its own incubator. These startled me considerably, but the story of their conception startled me even more. Indeed it filled me with horror, and with violent though short-lived moral indignation. The eldest of these embryos was three months old. Its father, I was told, was Shahin, its mother a native of the Tuamotu Archipelago.

The unfortunate girl had been seduced, brought to the island, operated upon, and killed while still under the anaesthetic. The more recent specimens, had been secured by milder methods.

Odd John, p.168

This 'short-lived moral indignation' which the narrator recalls seems to be further proof, were any needed, that we should see the biographer as also having been beguiled by John, and that again Stapledon's provocative spirit is at work.

40. Scott, op.cit., pp. 57-58.

41. Scott, ibid.

42. Damon KNIGHT, In Search of Wonder; Advent Publishers, Chicago, 1967; p.12.

43. George Bernard SHAW, Man and Superman; 'The Revolutionist's Handbook, IV. Man's Objection to His Own Improvement'; p.225 of the Penguin Books edition (1946;1977).

44. Shaw, op.cit., Epistle Dedicatory, p.13.

45. I am indebted here to I.F. Clarke's comprehensive survey of predictive fiction, The Tale of the Future from the Beginning to the Present Day (third edition); London, The Library Association, 1978.

46. Aldiss, Billion Year Spree, p.37.

47. Clarke, op.cit.

48. Bernard BERGONZI, 'The Time Machine: An Ironic Myth;' from H.G.Wells, A Collection of Critical Essays, edited by Bernard Bergonzi for Prentice-Hall Inc., New Jersey, 1973; pp.53. (Twentieth Century Views series)

49. Angus M.Taylor, 'Science Fiction: The Evolutionary Context' from The Journal of Popular Culture, Vol.5; p.858.

50. Bergonzi, op.cit., pp.45 & 46.

51. Who began this celebrated argument is unclear, but both authors defended themselves against the slights of the other. Verne, the established writer, seems to have scorned Wells's fiction for being too far-fetched or fanciful, slating Wells's invention of a substance having incredible gravity-defeating purposes, Cavorite, to take his explorers to the moon in The First Men in the Moon, as merely expeditious. He declared his own two novels about moon voyages, written before Wells's, to be the more realistic (hence satisfactory) since he had actually calculated the size of charge required to blast his projectile and its occupants to escape velocity. I think it was James Blish, himself always careful to provide a most plausible scientific framework in his stories, who mischievously pointed out that it was really as well that Verne's explorers had intended to circle the moon rather than land there for had they made such an attempt they would have been reduced to a colourful puree distributed uniformly all over the passenger compartment as the projectile hit the moon, thanks to Nature's insistence on the conservation of momentum!

One suspects that Well's later insistence upon his fiction being seen as 'scientific romance' was at least partly inspired by a determination to avoid being classed with Verne. I find his work much more interesting than Verne's because though his fiction may require a donnee of some kind it then proceeds in a gratifyingly consistent way. Verne's fiction does not bear the same close scrutiny, however:

> From the Earth to the Moon(1865) and Round the Moon(1870) are not without science and invention. In fact, Verne invents a new means of travelling to the moon and works it out in detail; and he loads his books with scientific

theories, facts and figures. But the mood is rollicking; some of the adventures are absurdities. The two features are simply sandwiched together, a slice of science and a slice of fun, in random widths.

Bailey, op.cit., p.47.

52. There is a good deal which would create offense were it not so easy to dismiss Verne's impulsive, casual bigotry, much of which is an artless expression of patriotic and male chauvinism. There are, for instance, those presumptious notions of his about Western, particularly Latin, racial supremacy:

> ...the influx of Chinese coolies into western America had...caused much perturbation in the labour market. The building of Frankville came just in time to save them from perishing... The wages were deposited every week in the great Bank of San Francisco, and every coolie was warned that when he drew it out he was not to return. This precaution was absolutely necessary to get rid of a yellow population, which would otherwise have infallibly lowered the tone and standard of the new city.
>
> The Begum's Fortune, Chapter X.

While admittedly this is quoted from the German article about the construction of Frankville on model principles, and Verne probably hated the Germans more than any other foreigners in the wake of their successful invasion of France, this contrasts oddly with Sarrasin's avowed intention to "invite visitors from every nation" "and offer it as a home and refuge for honest families forced to emigrate from over-populated countries"(Chapter III).

53. Taylor, op.cit., p.859. Taylor quotes Mark R. Hillegas.

54. Verne's chauvinism was not merely patriotic; women, where they figure in his novels at all - are portrayed as obedient creatures who support the domineering, patriarchal role of the Victorian father in a disturbingly self-effacing way, as Madame Sarrasin proves on hearing - via her son - of the bequest:

> When Madame Sarrasin had read her husband's letter again, she felt that this great sum was his, that he would take all the responsibility of deciding what she and her children were to do, and she speedily regained her usual composure.
>
> The Begum's Fortune, Chapter II.

I was puzzled initially by Sarrasin's decision to write to his son before telling his wife, until further reading convinced me of the utterly peripheral role given to women in the novel. Brian Aldiss includes More's explanation of this characteristic of Verne's fiction:

> Although a misogynist, Verne had the sense to marry well.. One of Verne's critics, Marcel More, has argued that behind Verne's industrious and bourgeois facade lay a more anguished personality, the key to which is the way the novels concern only masculine relationships and where women, the few there are, are mere cyphers.
>
> Billion Year Spree, p.107.

55. The modern reader's sense of proportion is likely to be offended by Verne's amazingly contrived introduction of Schultz as another heir to the Begum's millions. Schultz states his claim thus: "I am the grandson of the elder sister, Theresa Langevol, who married in 1792 my grandfather, a surgeon in the army of Brunswick; he died in 1814."(Chapter IV) Since we have earlier been told that Sarrasin is connected via his paternal grandmother with that Jean Jacques Langevol who inherited his wife's fortune when she, The Begum, died in 1814, the whole thing becomes - clear? It would be as well not to baulk at this, though, for, as James Gunn has noted, coincidence in Verne's fiction had an important function:

> Verne wrote simple stories about uncomplicated people... His plots consisted of abductions, searches, mysteries, and ambitious undertakings; the events of the stories were often marked by accident and coincidence (which he considered to be evidence of divine intervention in human affairs).
>
> Gunn, op.cit. Vol.I, p.254.

56. Brian Aldiss detects behind Verne's outward Catholic respectability a more complex personality. Noting his misogynism, he goes on to remark on the striking evasion or neglect of religious 'feeling' which is a consistent feature of Verne's work as a whole:

> More amazing than the lack of women is the lack of religious feeling; throughout the great turbulent landscape of the novels, there is scarcely a priest or a church to be had. In extemities, the protagonists utter only a conventional cry to Providence. True, Milliard City has a church, St.Mary's. Milliard City is the capital of Une ville flotante(1871).... a man-made island four and a half miles long and three broad, which travels about the oceans like a piece of floating geography. As with Verne's other machines, it works like mad. But no one visits the church. Verne is a utilitarian, a French Gradgrind.
>
> Trillion Year Spree, p.104.

Indeed, much the same can be said of The Begum's Fortune. On the other hand, perhaps Verne was concerned to avoid being accused of profaning his Church by boldly depicting it in this popular genre; or wary of brooking the misapprobation of the Vatican by falling foul of a casuistical construction of some work which might, perhaps, be seen as heretical or schismatic. This would serve just as well as an explanation of his circumspection in matters of a moral or liturgical nature; Aldiss's inference that Verne was as utilitarian in matters of belief as he was in matters of sociology may be too sweeping.

57. Marc ANGENOT argues that science has a clearly-defined role in Verne's fiction:

> The referent of Vernian discourse is the effect of science, as the successive projection of discrete inventions on the social body. This effect is essentially a quantifiable acceleration. Science is thus at once the guardian of the social status quo, and the means of its immanent transcendence.
>
> 'Jules Verne: the last happy utopianist' in Science Fiction, A Critical Guide, ed. P.Parrinder; p.29.

M.Angenot's case is to that extent supported by The Begum's Fortune. However, he is at odds with the whole drift of this novel in earlier claiming that, 'Science, for Verne, is at the same time exterior to social vicissitudes, innocent of society's contradictions and completely understood in its effects.' I.F. Clarke's synopsis more reliably reflects the basic plot, 'The virtuous Frenchman, Dr.Sarrasin, and the wicked Professor Schultz of Jena construct their ideal cities in North America.'(op.cit.) While Verne ultimately depicts the triumph of Sarrasin's "moral" science over Schultz's "immoral" science, he does reveal some awareness of the potential for oppression inherent in scientific innovation. Verne also seems to have sought to acquire a degree of moral significance for his novel, as his concluding words suggest, by having it stand as a sort of entertaining popular homily:

> We may be assured that the future belongs to the efforts of Doctor Sarrasin and Max Bruckmann, and that the example of Frankville and Stahlstadt, as model city and industrial town, will not be lost on future generations. The Begum's Fortune, Chapter XX.

58. Aldiss, Trillion Year Spree, p.103.

59. James Gunn (op.cit., pp.211-212) has described Poe's 'Mellonta Tauta' in terms which, when seen in the light of Wells's novel, suggest that while Wells brought the geological time scales of evolutionary theory into science fiction, the credit for introducing the 'future historical' perspective is Poe's:

> 'Mellonta Tauta' may be the first true story of the future. Dated one thousand years from the time Poe wrote it, the story incorporates an important recognition that the future will be so different that it will have forgotten us almost completely, and what it remembers will be confused and often wrong. The novel effect on the reader is the intellectual counterpoint between our knowledge and 'Mellonta Tauta's' understanding, and our recognition of why these differ.

Of course The Time Machine is a much more complex and I think memorable fiction. I.F.Clarke (Voices Prophesying War, pp.54-55) has argued convincingly that Darwinian evolutionary theory helped provide a more topical if perhaps deterministic framework for the predictive tale of the future; it was,

the final mechanism required for the smooth functioning of the tale of the future, since it brought the apparent certainty of scientific law to the general conviction of progress. And so the interest that followed on the publication of the Origin of Species in November 1959 had the effect of providing a biological explanation for the constant technological progress and social struggle that all knew to be going on around them.

Darko SUVIN's analytical discussion (he explains his methodology as 'structuralism...as a synthesising medium,' to distinguish himself from orthodox structuralists) describes his view of Wells's usage of T.H.Huxley's speculative theory of convergent evolution as a source of ideas for the degenerate species of animals which the Time Traveller encounters. See 'The Time Machine versus Utopia as a Structural Model for Science Fiction' by Darko Suvin; Comparative Literature Studies, Vol.X (1973); pp.334-352.

60. Bernard BERGONZI, 'The Time Machine: An Ironic Myth;' op.cit., pp.39-55.

61. The Time Traveller describes his most refined theory as follows:

> 'So, as I see it, the Upper-world man had drifted towards his feeble prettiness, and the Under-world to mere mechanical industry. But that perfect state had lacked one thing even for mechanical perfection - absolute permanency. Apparently, as time went on, the feeding of the Under-world, however it was effected, had become disjointed. Mother Necessity, who had been staved off for a few thousand years, came back again, and she began below. The Under-world being in contact with machinery, which, however perfect, still needs some little thought outside habit, had probably retained perforce rather more initiative, if less of every other human character, than the upper. And when other meat failed them, they turned to what old habit had hitherto forbidden.' (Chapter 10).

Wells suggests that the decline in human society was produced by intellective degeneration and a disappearance of initiative among the privileged surface-dwellers, exacerbated by their neglect of the workers who provided for them.

62. Further confirmed by another of Wells's comments on his science fiction in which he characterised it as, "the vivid realization of some disregarded possibility in such a way as to comment on the false securities and fatuous self-satisfaction of everyday life." Quoted in Footnote 3, Suvin, op.cit., p.349.

63. Carol MURPHY, 'The Theology of Science Fiction;' Approach, 23 (1957); p.4.

64. Mark R.HILLEGAS, The Future as Nightmare: H.G.Wells and the Anti-Utopians; Oxford University Press, New York, 1967; pp.14-15.

65. Attributing something of the 'darkness and pessimism' of the scientific romances to prevailing social conditions, Hillegas has

characterised contemporary English society thus:

> ..we must remember that they were written against the background of grave social injustice and economic distress, socialist agitation and labor unrest. Fifty years after Disraeli had written of 'the two nations,' England still chiefly consisted of the rich and the poor. At the bottom of the social heap were the exploited multitudes of the industrial proletariat, who..... still led horribly deformed and meaningless lives. Above them were the energetic and upwardly aspiring middle class, cramped by the conditions of their existence only at the bottom levels of the class. At the summit, the 'unpremeditated, successful, aimless Plutocracy' led sterile lives of unproductive leisure. The middle and upper classes....managed, in the face of worsening conditions during these last years of the nineteenth century, to hold to their faith in "progress," managed to believe that things were somehow improving. In his scientific romances and stories written at this time, Wells set about vigorously to attack this late Victorian complacency, for in his opinion there was no greater enemy of progress than a belief in inevitable progress. He launched this attack....from what is best described as the 'cosmic pessimism' of T.H.Huxley.
>
> The Future as Nightmare, p.18.

66. Hillegas, The Future as Nightmare, pp.19-20.

67. Hillegas quotes Orwell's personal acknowledgement of the extent to which he felt Wells had influenced him:

> Thinking people who were born about the beginning of this century are in some ways Wells's own creation. How much influence any mere writer has...is questionable, but I doubt whether anyone who was writing books between 1900 and 1920, at any rate in English, influenced the young so much. The minds of us all, and therefore the physical world, would be perceptibly different if Wells never existed.
>
> 'Wells, Hitler and the World State'
> in Dickens, Dali and Others;
> (quoted by Hillegas in The Future as Nightmare, p.6)

68. I.F. CLARKE, Voices Prophesying War 1763-1984; Oxford University Press, London, 1966; p.181.

69. Clarke, Voices Prophesying War 1763-1984, p.182.

70. Mary WEINKAUF, 'The God Figure in Dystopian Fiction;' Riverside Quarterly, 4 (1971); p.267.

> Since immutability is assumed of most gods, Winston Smith's department sees to it that although rations are lowered instead of raised and war is with Eastasia instead of Eurasia, the records still show Big Brother's unchangingness. Changing written records to correct earlier

predictions and to reconcile past policies with present contradictory ones, Big Brother is the god of time and history. The past is destroyed, and those inconvenient persons who disagree with the state are not only killed, but become "unpersons," never having existed.

71. Clarke, Voices Prophesying War 1763-1984, p.182.

72. Raymond WILLIAMS, Orwell; Fontana/Collins, 1971; pp.78-81.

73. Wells seems to conclude in this projection that even the most well-intentioned, humane schemes of government are liable to to become oppressive and pernicious.
(See also 75, below.)

74. To be discussed at length in Chapter Four.

75. Mark R. HILLEGAS, The Future as Nightmare: H.G.Wells and the Anti-utopians; Oxford University Press, New York, 1967; p.159.

76. The scenario of Player Piano is, in this and other important respects, strikingly similar to that Wells uses in When the Sleeper Wakes. Graham, the turn-of-the-century Socialist thinker in whose name a council of twelve men rule the world in 2100, awakes from a trance into which he slipped in 1897 to discover his expectations tragically disappointed, as Mark R. Hillegas describes:

> Instead, (Graham) finds that history has taken a much different course than Socialists like himself had expected. Because of "the moral decay that had followed the collapse of supernatural religion," the "decline of public honour and the ascendancy of wealth, it had been a natural evolution of affairs during the period 1900-2100 for political power to fall into the hands of the small group of extremely able 'bosses' who, in Graham's name, literally own the world and are so secure in their control that they have even thrown off the pretence of democracy and rule ruthlessly with the help of such enforcement agencies as the Labour Police.
> The Future as Nightmare, p.42.

77. Harold L. BERGER, Science Fiction and the New Dark Age; The Popular Press, Bowling Green University, Ohio, 1976; p.17.

CHAPTER FOUR

'Screams of Horror?': The Intemperate Moral Climate of the Brave New World

In some of the books discussed in this chapter one perceives a sense of gloomy disquiet about the future of religion; in others, the issue is rather one of concern about an ethical code cited as its replacement, and (as much after Huxley's Brave New World as anything by Mary Shelley or Wells) the worth and validity of the new norms. Bearing in mind the reservations of orthodox moralists like Alfred Noyes (whose novel The Last Man is discussed below) who reject the idea of moral relativism, the central problem could be stated as 'a modern popular disaffection with, or loss of faith in traditional mores which derive their standing and influence from a time-honoured religious provenance.' J.Norman King, noting that 'Man's current existential orientation is focused upon the future,' has provided an explanation:

> ...one of the central theological problems of recent years has arisen because we no longer share the language and thought-forms of that earlier culture which elaborated its beliefs and values over a period of centuries. These convictions strike us today not as false but as unreal, as unconnected with our everyday life and experience. If they are to retain any living meaning for us, they must be translated into concepts and words which speak to our experience; that is to say, which reflect our new orientation. ...theology and science fiction meet in this concern for the future and, through it, in the consideration of the ultimate issues of life and its meaning.
>
> 1.

Some of the novels, then, are vehicles for quite explicit authorial homilies on what new moral codes characterised by expediency and social utility might mean. Others introduced here will offer speculative explanations as to why religious morality is so often a target for scornful, dismissive criticism when it is seen in the light of an

emphatically materialistic society. Morality besieged by materialism is a central theme of some of these novels, and in others, morality under seige has long since succumbed to expediency and hedonism. Yet, as Walter M.Miller's marvellous novel A Canticle for Leibowitz suggests, the Philosophia perennia of Christian humanism will always have advocates.

Behind the entertaining futuristic trappings of these science fiction stories there is evidently some genuine concern about the consequences for religious moral precepts of the sweeping social change characteristic of technological societies. With the exception of Walden Two the novels are imaginative tracts against moral expediency and the domination of the interests of the individual by those of technology and materialism centralised as state policy.

In the early 1960's a public argument arose between two leading advocates of different opinions about the standing and importance of science in the modern world. It was C.P.Snow, physicist and author, who, in his 1959 Rede Lecture(2), revived a controversy which had long been occupying authors of science fiction (3). Snow argued that science was of far greater benefit to mankind than the aesthetic culture (the world of the traditional humanities encompassing art, literature and history, music and philosophy) acknowledges, and that a selective blindness prevailed which contributed to the divide which he alleged lay between them and the 'culture'(4) for which he believed he was speaking. This divide was abysmal, he alleged, because both factions were blind to the merits of the other.

Snow contends that the aesthetic culture is decadent, remote, self-regarding, and surviving on an anachronistic repute to which it is no longer entitled. For him its literary spokesmen are 'natural

Luddites' as unable to grasp the import and promise of the contemporary scientific revolution as their predecessors had been unable to comprehend the Industrial Revolution. He continues in what he clearly thought was an humanitarian vein, though the unalloyed scientific materialism of his proposals betrays their simple positivism.

Evidently stung by the smug, even arrogant tone of Snow's polemic, F.R.Leavis counter-attacked in his Richmond Lecture(5). But as James Gunn notes, for all its rancour and ferocity their exchange was not unprecedented: 'The Snow-Leavis debate was virtually identical with a similar disagreement in the 1880's between T.H.Huxley and Matthew Arnold and in the second decade of the twentieth century between Wells and James.'(6) The 'Two Cultures' wrangle is perhaps most significant in that it shows that the central problem of the standing of science in relation to the rest of the modern world still seems intractable. Gunn traces the origin of the crisis of confidence in science to the mid nineteenth century ('somewhere between the Industrial Revolution and World War I'(7).

Leavis is assiduous in countering his opponent; not content with merely debunking Snow's tendentious promotion of 'the scientific revolution' and what he had depicted as its culture, Leavis launched a blistering personal attack upon Snow, the 'spiritual son of Wells'. In answer to his central question - 'Who will assert that the average member of a modern society is more fully human or more alive, than a Bushman, an Indian peasant, or a member of one of those poignantly surviving primitive peoples, with their marvellous art and skills and vital intelligence?' - one could cite the programme (from Player Piano, 1952) of Vonnegut's subversives as testimony supporting Leavis's contention that, contrary to appearances, the life of urban

man is no more rewarding than that of a tribesman. The 'Ghost Shirt Society' have dedicated themselves to the restoration of humane values in a technocratic America of the near future which has succumbed to its own appetites and drifted into oppressive decadence:

> "Again, let me say we are all in this together, but the rest of us, for what we perceive as good, plain reasons, have changed our minds about the divine right of machines, efficiency, and organization...
>
> "During the past three wars, the right of technology to increase in power and scope was unquestionably, in point of national survival, almost a divine right. Americans owe their lives to superior machines, techniques, organization, and managers and engineers. For these means of surviving the wars, the Ghost Shirt Society and I thank God. But we cannot win good lives for ourselves in peacetime by the same methods we used to win battles in wartime. The problems of peace are altogether more subtle.
>
> .....
>
> "I hold, and the members of the Ghost Shirt Society hold:
>
> "That there must be virtue in imperfection, for Man is imperfect, and Man is a creation of God.
>
> "That there must be virtue in frailty, for Man is frail, and Man is a creation of God.
>
> "That there must be virtue in brilliance followed by stupidity, for Man is alternately brilliant and stupid, and Man is a creation of God.
>
> Player Piano, pp.254 & 255 (abridged).

This does presuppose that God exists, but look what follows from it: that Man is not perfectible, scientifically or otherwise. It is obviously a conventionally pious line of reasoning, as those who wrote it acknowledge - albeit almost by default, ironically:

> "You perhaps disagree with the antique and vain notion of Mans' being a creation of God.
>
> "But I find it a far more defensible belief than the one implicit in intemperate faith in lawless technological progress - namely, that man is on earth to create more durable and efficient images of himself, and hence, to eliminate any justification at all for his own continued existence.
>
> Ibid.

The inference might be that our state of futile ignorance predicates faith in God. One suspects Leavis would reject the stalemate which Vonnegut mockingly contrives in Player Piano, for as his closing

affirmation in a humane future makes clear, he is too astute to permit his views to be dismissed as reactionary: 'But I will come to the explicit positive note that has all along been my goal (for I am not a Luddite) in this way: the advance of science and technology means a future of change so rapid and of such kinds, of tests and challenges so unprecedented, of decisions and possible non-decisions so momentous and insidious in their consequences, that mankind - this is surely clear - will need to be in full intelligent possession of its full humanity.' Nor should we overlook his forthright rejection of merely conventional wisdom, 'I haven't chosen to say that mankind will need all its traditional wisdom; that might suggest a kind of conservatism that, so far as I am concerned, is the enemy.'

Undoubtedly Snow makes himself an easy target for Leavis; and while their debate may be less than compelling and, however provocatively conducted, less than thought-provoking, even Leavis's thundering excoriation cannot quite obscure the significance of Snow's allegation that there has always been a prevailing, growing crisis in Western values - the inevitable result of the struggle for ascendancy of the two cultural factions he has identified.

This chapter will suggest the main features of the traditional, religious morality which Wells, Stapledon, Clarke _et al._ have confronted in some of the genre's most highly-regarded novels, by reviewing some equally notable novels by authors whose promotion of religious morality is unmistakeable. Not surprisingly, then, there is another variety of science fiction which shows (often polemically) that not everyone is convinced of the virtues of reason over faith, however strongly others may advocate secular rationalism. Indeed, the leading question for this chapter could be put as follows: If

'Progress' can bring genuine improvements to the material circumstances of life, why are some moralists so unhappy about it? A striking characteristic which appears repeatedly in their tales (both by allusion and explicitly) is the Scriptural story of the Fall, which is customarily used to convey a ritual prohibition against 'ophidian rationalism' and hubristic aspiration.

While there are those who would argue that all these authors are regaling us with a hoary tale of only allegorical significance, it is important to realize that for many of them these writings are testaments of their personal faith and convictions. Additionally, to try to strike a balance, arguments from sceptical authors who have a professed antipathy for conventional morals will be adduced. For all their relative obscurity, the two texts chosen to begin this discussion do present very plainly one central assumption shared by all these writers: ethics and religious beliefs are intimately associated. They also show that the alarm had been given by moralistic science fiction writers long before Leavis took on Snow.

The Devout Tradition and the Philosophia Perennia.

In 1859(8) a rather unusual volume was published in London which purported to be an eye-witness account of the end of the world. This odd little novel, A Dream of the Day that must come (Anon.; attributed Mrs. Penny), was not just one more vehicle for the much more popular fictional speculations about the next European war, but was in fact a late, hybridised example of a species of fiction which described fin-du-monde through the eyes of the last survivor. Mary Shelley, for instance, had herself written such a story, The Last Man, seventeen years before in 1826, some eight years after Frankenstein

had met with its phenomenal success. Yet while Mrs. Penny's slim novel concludes in that vein, it begins very differently. Cast as a dream projection, yet insisting on its reality and thus falling very awkwardly between the two generic poles, fantasy and realism(9), it is in many ways a contemporary version of Bunyan's The Pilgrim's Progress(10). Like Bunyan's story, A Dream is both allegorical and imaginative, but where Bunyan's narrative skills are well able to convey the intensity and scope of his vision, those of Mrs.Penny were often overwhelmed.

This novel is nevertheless of interest and relevance to the present discussion of attitudes to morality and religion, particularly because the authoress makes her own position as a committed Christian so explicit (albeit through the medium of her male narrator); and because her principal theme is that of the modern decline in morality. The world Mrs.Penny depicts - her contemporary world - is one seemingly in the grip of a logical positivism drawing its values and vigour from scientific innovation, which she alleges is change at its most disruptive(11). Progress has worked visible changes upon the landscape, and wrought even more telling ones within the human sensibility:

> As we approached London, but still at the supposed distance of about twenty miles, I could not help observing to my fellow-travellers, how much the face of the country had changed, since I had been that way. Mansions and villas and manufactories were seen on every side. An intelligent looking man, who sat opposite me, agreed that these indications of national opulence were indeed remarkable, but that if I had not visited London for some time I should be much more surprised with what I should see there: that there the proofs of the rapid progress of national wealth and power were everywhere conspicuous, and so many objects of taste and magnificence in all that related to architectural embellishment, and indeed in all the arts and refinements of social life, that it seemed impossible to carry them to a higher pitch of excellence. "And it would be well" added

> an elderly gentleman by his side "if the same spirit of improvement had extended to the moral as well as to the physical condition of the people. But what a contrast! As we have advanced in luxury, we have receded in everything belonging to religion and morals."
>
> A Dream, pp.2-3.

Mrs. Penny casts her narrator as a provincial family man whose reluctant journey to London is the means whereby she can establish at the outset of her story certain premises: that society is susceptible to accelerating change; that the religious commitment of humankind is inconstant and readily corrupted by worldliness and materialism; and that the morality of mankind is linked profoundly with religious conviction, especially Christian faith. These are the very concerns and associations which turn up again and again in the religious science fiction of Lewis, Blish, Miller et al, her modern successors.

Though the narrator is impressed by the quality of the fine new buildings he sees everywhere - again the benefits of Progress are at least implicitly acknowledged - he is struck by the absence of any new ecclesiastical buildings: 'All indeed for some purpose of social luxury, and all gorgeous, but not one apparently for religion. There were indeed a few old churches, but they wore a melancholy and dilapidated appearance, and seemed...as though they belonged to some by-gone superstition.'(12). The ubiquitous modernism is materialistic; he has already heard that this decline in the fabric of churches has been matched by a decay in religious belief and practices (so much so that St.Paul's Cathedral - except for its chapel - has become a commercial exchange). This prospect arouses in the worthy narrator these bitter reflections on the low esteem presently accorded religion:

> This corresponded with the observation which had been made on my journey as to the fallen state of religion. The church, as a national institution had, it seemed,

> been long since set aside by Act of Parliament, and the voluntary principle introduced in order to revive religion. But the measure did not seem to answer; a regard for religious observances, and afterwards for religious doctrines, and then for moral obligations of every kind, had gradually decreased: infidelity was the fashion of the day; religion was laughed at, and barely tolerated.
>
> A Dream, p.6.

However Mrs. Penny's aversion is not restricted to the decay in orthodox religious observance, as the ironic consultation between her narrator and his urbane lawyer reveals. An appointment with this solicitor has been the reason for the narrator's journey; and the worthy provincial is aghast at the lawyer's professional cynicism and his lack of moral scruples. '"But truth, Mr.S., and integrity?"'(he asks in naive amazement) '"Bah!" retorted the hopeful disciple of the new school of law and ethics, '"what is the use of truth or integrity in these days? Depend upon it, honest dealing can never be a match for knavery, least of all at this time, when nobody in their senses thinks of making any further pretension to virtue than may serve their private ends - as a cloak to conceal their real purpose, namely, to take advantage of those they deal with."' The visitor feels compelled to question the propriety of this glib avowal of purely utilitarian principles:

> "But is this right? Does it justify you or me in departing from the path of honour and religion?"
> "It is expedient" rejoined my legal adviser, "and it is fair, for all act upon the same principle, and all expect it."
> "Mr.S.," I replied, "until now I took you for an honest man."
>
> A Dream, pp.7-8.

Mrs.Penny asserts that in this "dream-time" London, this contemporary Babylon, 'truth and integrity' are as old-fashioned as the Christian ethics which incorporated these qualities. Her pious traveller is so horrified by the cynicism and professional duplicity of 'Mr.S.' that

he decides to take his brief elsewhere. Ironically, the expeditious lifestyles of the hedonists and materialists is to endure for only a while longer, and soon after leaving the glib lawyer's office the narrator is an incredulous witness of the first hint of an approaching cataclysm. As he stands looking out over this unnerving new London 'lost in meditation at the progress of luxury contrasted with the decline of religion,' he is aghast to hear a trumpet pealing from the heavens - a 'fearful portent' to a 'guilty world,' as he immediately construes this astounding event. He at once sets out for home, to find there the twin consolations of the company of a devout wife and family and of prayer.

His story continues with a second phase of dreaming in which he is to witness the failure of mundane science to explain or control the progress of a dense black cloud which advances inexorably throughout these last days of Man's stewardship of the world. While this second section of narrative is principally taken up with Mrs.Penny's visions of the frantic preparations to flee from the cloud, she takes the opportunity to scorn a last folly before the narrative is wholly given over to matters spiritual. Significantly, the object of her censure is science.

In what is clearly an instrumental opposition, the narrator carefully relates the futile efforts of scientists in the face of this supernatural disaster, even when this means that the author must contrive obviously the circumstances wherein he gains such a privileged insight into their ostensibly private thoughts and misgivings. For Mrs.Penny, discrediting human science is undoubtedly a central concern, one which over-rules her commitment to narrative realism.

The immediate aftermath of the strange trumpet blasts from the heavens is dominated by the attempts of rationalists to account for the phenomena. London is alive with speculation and theories, and, in an authentically modernistic touch, the narrator reports that the most common recourse is to the men of science rather than to the clergy: 'All were anxious to learn what others thought and felt, and especially what were the opinions of those who were most in esteem as men of science and talent.' Yet Mrs.Penny depicts the scientists as deceitful, vain figures ('these sagacious persons') whose unwillingness to acknowledge publicly their private confusion and alarm means that many trusted with informing the public 'persevered in a peevish resistance of the truth' rather than emulating those few journalists who, turning once more to religion, 'resolved to make all reparations in their power by warning men of the wrath to come':

> But in truth these sagacious persons were more perplexed than others. The night was passed by most of them in sleepless anxiety to explain by the operation of natural causes an undeniable fact so much out of the usual course of nature. Their conjectures and speculations, which savoured more of the feverish excitement of their minds than of philosophical penetration, were speedily spread abroad by some newspapers which, in consequence of the importunity of the populace, were issued at a late hour in the morning and eagerly bought up. The columns of these newspapers were filled with details of the singular event which had engrossed public attention. A few writers who had before shewn no favor to religion, at once acknowledged their error, and even resolved to make all the reparations in their power by warning men of the wrath to come. Others, however, persevered in a peevish resistance of the truth; they eagerly seized and exhibited the crude and impossible theories of scientific men. The favorite hypothesis was built on the possibility of sound being carried from a great distance, perhaps from the moon, and falling on the ears of the inhabitants of this country in the manner experienced.
>
> A Dream, pp.23-24.

Whatever the shortcomings of her own insights into the extent of contemporary scientific knowledge, Mrs.Penny further pursues her goal of

discrediting the scientists whose influence she so clearly mistrusts - and resents, for there is a merely implicit acknowledgement of science as beneficial or constructive. Mrs.Penny's scientists are no Sarrasins, whose good character is proclaimed by their author; in her eyes, their humanism is materialistic, godless and amoral, irreligious and hedonistic. Having characterised them, and the journalists who disseminate their conclusions to the public at large, more or less as scriptural false prophets, she ends by representing their efforts to investigate the enigmatic black cloud as being either fatally foolhardy, or completely fruitless:

> As I walked slowly along the terrace I overheard relations of many extraordinary scenes which the bystanders had witnessed. A body of scientific men still had the hardihood to maintain that the dark vapour was the product of a very singular combination of natural phenomena.
>
> An enormous wreath of volcanic smoke, replete with fine and light ashes was said to be the cause of the darkness. In the daytime it advanced, because the particles were intermixed with vapour, and being rarified were thus carried forward by a light breeze in the upper strata of the atmosphere; but at night, the cloud being more dense, it diminished in altitude, and was not moved by the breeze. So convinced were some of the truth of their hypothesis, that they offered to form a party which should enter the cloud, and make such observations as would settle the point. The speaker had witnessed this rash attempt. As no horses would move in the direction of the cloud, the experiment was tried on the northern railroad: one carriage was filled with the philosophical party, and others followed which were to be detached when they came nearer the cloud. The leading carriage, after being separated from the rest, was to proceed alone at a slow rate. But after a short time, from some unknown causes the speed was accelerated, the men at the engine seemed to have lost all command over the machinery, the whole party were hurled forward and in a few minutes were lost in the darkness, from which, of course, none returned.
>
> A balloon had also ascended with three or four bold adventurers above the height of the cloud, and then descended safe. They reported that the darkness seemed to spread many miles, and beyond it there appeared smoke of a dark ruddy colour which extended as far as the eye could reach. They could discover nothing further.
>
> A Dream, pp.45-46.

With this symbolic humiliation of the scientific establishment a veritable turning point in the novel is reached; science and its adherents are seemingly of no further significance, and the authoress's primary concern becomes the metaphysical pilgrimage of her narrator - a quest for redemption rather than knowledge, demanding self-abasement and mortification rather than self-assertion and endeavour. (13)

If in Mrs.Penny's outlook the scientist is ultimately a far less threatening figure than Frankenstein (whose power-fantasies of being the creator of a super-race dedicated solely to him were no less pernicious, or selfless, than Faustus's profane appetites), the science fiction of the present century abounds with much more terrifyingly mad scientists. Alfred Noyes's Mardok is a prime example - his amoral ruthlessness and egotism cannot exceed that of a Moreau or John Wainwright, of course, but his author has endowed him with a prolific, purely malign inventiveness. The sheer topicality of the threat his kind are held to represent exploits another, thoroughly modern dimension of terror which even now exercises its uniquely disquieting influence couched in Newspeak terms like 'overkill' and 'mutually assured destruction'. As J.O.Bailey reflected soberly in 1947, 'Manpower and military strategy decided old-fashioned wars; machines and industry decided recent ones. Science will decide the outcome of any wars from now until the blackout. It may be blackout, because the latest weapon of science is the fundamental discreative force of the universe.'(14)

Alfred Noyes's tale of a scientific apocalypse, The Last Man(15), was published in 1940 at the height of a global conflict which saw the general use of weapons with a scientifically-refined capacity for

destruction, and, with the advent of the atomic bomb, the debut of one with an unsurpassed efficiency. Noyes's sardonic discussion of the state of the contemporary world, in which he takes a side-swipe at both the odious, simplistic tenets of the 'social darwinism' espoused by the extreme right, and the sophisticated cynicism, capriciousness and moral inconstancy of the avant garde, might even suggest that the intervening century saw the fulfillment of Mrs. Penny's worst fears about moral decline:

> For over a hundred years, the leading nations had been discovering more and more deadly poison-gases, more and more subtle ways of disseminating disease-germs among their rivals, with a view to the survival of the fittest. The naive question - "fittest for what?" - was no longer asked by intelligent men and women. In the meantime, the mind and spirit of the whole race had been profoundly affected by the great discovery that the old distinction between right and wrong had no absolute foundations, as the more unsophisticated followers of outworn creeds had supposed; and that, in the eyes of the intelligentsia, right and wrong had long been regarded as entirely "relative". Indeed, for a large section of modern art and literature, in which the souls of nations are supposed to express themselves, the absolute imperatives of the moral law had become merely "public conveniences".
>
> The Last Man, p.6.

Although there are very significant narrative differences, Noyes and Mrs.Penny do share certain themes and issues. The wartime moralist is no less a devout or committed Christian than his Victorian predecessor; like her, he believes that there are 'absolute imperatives of the moral law'. These undoubtedly help to shape both novels, for both writers begin by including a description of what they believe are the very visible symptoms of a general decline in moral standards. Both novels are characterised by a quite discursive mis-en-scene in which the author's point-of-view intrudes fairly frequently. Even more apparent, though, is a shared distrust - indeed, disdain - for the professional scientists of their day.

Noyes refuses to absolve from the inventors of the weaponry the opprobrium earned by Grumkow, the Hitlerian leader who unleashes the Satanic device which virtually destroys the human race. Not yet the faceless man the scientist will become in later science fiction, Noyes credits Professor Hammerstein of Bonn with the actual discovery of the '(immensely serviceable and curiously symbolical) all-pervasive aethereal wave which would instantaneously stop - not the engines of motor-cars and aeroplanes - but the beating of the human heart.' His fullest contempt, however, is reserved for Professor Muck:

> Professor Muck, who had been Professor Hammerstein's chief laboratory assistant, had surreptitiously copied the records of his invention, and sold them separately to agents of the British, French, Italian, American, Soviet, Turkish, Japanese and Chinese Governments, at a thousand marks a time.
>
> It was a small sum for a secret so important; but Professor Muck was a modest little man, and a great admirer of the English poet, Wordsworth, whom he often quoted in praise of "plain living and high thinking". His only other pleasure was angling, which is not an expensive sport.
>
> The result was that all the combatants, in all parts of the world, possessed a secret weapon so formidable that, to do them justice, most of them would have shrunk in horror from using it, except - and this was the fatal reservation - <u>except in the last resort</u>.
>
> <u>The Last Man</u>, p.9.

Having thus established the nature of the threat and its source, Noyes goes on to attribute even the dictator's fatal decision to carry out this ultimate threat, to the logical precepts of science: 'To the protagonist on this occasion the "last resort" was merely the correct and perfect application of science. It was the highest kind of "Real-politik" to wipe out your enemies as completely as you would wipe out a hornet's nest. As soon as hostilities began, therefore, Herr Grumkow decided to use the formidable means at his disposal.' (p.10) I.F.Clarke has claimed for Noyes a notorious accolade; his is 'the doubtful distinction of having written the first account of

instant warfare in the history of this literature' (16). Clarke then identifies a central theme of Noyes's story, which, in the context of the present discussion, is worth exploring in more detail:

> In contrast to the many solutions put forward by authors of imaginary wars, in Noyes's view there can be no easy solution to the spiritual problem at the heart of war and political folly. A ban on bombing planes, the control of machinery, even a return to a state of nature have nothing to do with the problem. Man has to reform himself from within according to the ideal pattern of Christianity.
> 'The most tragic thing of all', he writes, 'was that the complete answer to all those tragic disputations and conflicts was there all the time in the philosophia perennia of Christendom.'
>
> Ibid.

With the second chapter, the novel becomes the story of the experiences of Mark Adams as he searches for fellow survivors. He owes his own preservation to having been held prisoner in an enemy submarine when the lethal wave was simultaneously unleashed by a number of the opposing powers. Though the foreign crew were killed when they left their vessel, Adams was unable to escape his bonds for a time and so did not fall victim to the ultimate weapon. The eponymous Adams wanders alone through a dead England, piecing together the story of the tragic event by gleaning details from a variety of sources, many of which carry the poignant message, OUR CONSCIENCES ARE CLEAR, the ironic refrain of the third chapter. As Mark makes his way, Noyes castigates politicians, aristocrats and celebrities, further reinforcing his opening depiction of a decadent society. While the author's compassion for the millions of ordinary dead whose chalky rather than corrupting corpses litter the streets where Mark passes seems rather perfunctory, Noyes cannot resist wringing the withers over the deaths of a few celebrated, moral men like the Prime Minister or the dead physician whose frozen features reflect a highly principled - and conservative - humanism, which for

Noyes is the only acceptable face of science:

> In another (room) the wondering faces of children looked up with a peaked and curiously old wisdom and truthfulness into the compassionate face of the physician. Wherever he looked, Mark saw here, or thought he saw, an integrity of mind and will that might have gone far towards the redemption of the race. In the very nature of things, a good doctor had no use for lying reports (physical, intellectual or political). He could not play modernistic monkey-tricks with his cases. There was no room for Dadaism in diagnosis, or Gagaism in treatment. Nor would the most "advanced" of his patients have been anxious for surrealistic methods in surgery to be practicised by a "sub-conscious" mind on his own body. Law, the lamp of knowledge and absolute precision, were the creed here, if nowhere else. It was apparent in the fine intellectual values, the look of self-control and keen efficiency, the firm lines of character, in face after face among the healers.
>
> The Last Man, p.49.

Noyes's depiction of this august physician contrasts sharply with his presentation of the leading lights of the 'Unity Movement', whom Mark encounters next. As their minutes reveal, the Executive Committee had apparently been debating the current crisis when events overtook their well-intentioned deliberations. Here Noyes seems to give way to his compulsion to castigate. His satire at the expense of several obvious celebrities (including Wells, by association, and George Bernard Pshaw!, by caricature; both of whom were - before fascism enacted a terrible realisation - to a greater or lesser extent intrigued by the Ubermensch philosophy of Nietzsche so loathed by Noyes) deteriorates into heavy-handed facetiousness. The 'movement' seemingly cannot agree upon anything, even a name. Noyes's own opinions are conveyed authoritatively in the form of the sage comment of a Roman Catholic Cardinal whose letter had been under discussion:

> 2. A definite belief (as I call it) or dogma (as you call it) is essential to any serious movement, secular or religious, for the betterment of the world.

3. A definite belief, no matter how small, necessarily rules out everything (no matter how big) which is in direct contradiction to it.

The Last Man, p.50.

Quite against the run of Noyes's argument, the discussion of the group (however muddled, contradictory and ridiculous Noyes has tried to make them look) seems more constructive than the parched prescriptions and definitiveness of the prelate, for they are at least prepared to scrutinize their own assumptions as readily as they criticize opinions they reject. Using extracts from their minutes, Noyes readily identifies the group's majority progressive humanism with scientism, atheism and materialism:

> According to the minutes one opponent had replied that he could see nothing very spiritual about the bombs of the I.R.A. and that, in any case, he was a materialist and did not believe in the existence of spirits at all. The sharp-nosed spinster... had apparently supported this. She had pointed out that "Wells, long ago, had shown the astronomical inadequacy of a 'Friend for little children, above the bright blue sky.' Surely," she had appealed, "we can't go back to that!"
>
> A thoughtful little man had replied that these considerations were hardly relevant to the scientific conclusions of Christian writers like Harnack, and that Origen, nearly two thousand years ago, had--
>
> At this point, for some reason, the atheist had ejaculated Pshaw! in a tone that had led to a general squabble about manners, and the writer of the minutes had lost himself in the battle. The Last Man, p.51

Here Noyes also suggests the modernistic proliferation of philosophies, and alleged moral confusion, which his belief in constant moral precepts avoids. The ideas he supports are presumably open to the criticism of being old-fashioned; indeed he has gone on the offensive with a will, trying to show the disarray and inconclusiveness of new-fangled ideas. He does, however, show himself informed enough about certain aspects of them to be able to send them up, however fatuously; and he has by no means finished his attack on modernism(17).

Nonetheless, Noyes has as it were painted himself into a corner because these ideas and debates belong to the world now ostensibly dead, and consequently of little further interest. Likewise, his story of The Last Man has reached a point where all the obvious narrative prospects have been exhausted, other than in following his survivor's experiences to the end of his celibate, lonely days. Accordingly, Noyes broadens the scope of his tale by introducing a fellow-survivor, The Last Woman, and when their romance is well established, The Last Villain, Mardok.

As we have seen, Noyes has, in the shape of Hammerstein and Muck, already identified science and the scientist as the real threat, rather than materialism in the abstract. Once Mark has left England, we are introduced by degrees to Mardok, who is a personification of the potent evil of scientific materialism. Noyes has postulated that the two world-views represented at the Unity Movement meeting by the secular opinions of the Committee members and the prelate's letter ('A definite belief...necessarily rules out everything which is in direct contradiction to it.') are mutually exclusive. The young couple's struggle with Mardok is an explicit dramatization of the conflict between these ideologies. Of course, Noyes has nothing good to say about Mardok, who is portrayed as a quintessential (and for me, quite unconvincing) villain. Mardok is a caricature of a Neitzchean superman, full of an egotistical and obsessive will-to-power, a scientist who pursues his malicious ends in a moral vacuum devoid of 'standards':

> Mardok might be frightening as a gangster might be frightening to a helpless victim. He was incalculable, not because of the genius which Antonelli attributed to him, but because he had no standards. Power was in his hands, and he was unfit to use it. He had the explosive energy of an epileptic, and it was mistaken for strength, just as the

> fixity of his ideas was mistaken for strength of will and purpose. Their force was derived from the narrowness of the mental channels in which they ran, and this narrowness was, in some ways, the most frightening thing of all.
>
> The Last Man, p.128.

In Chapter XVII Mark finally catches up with the elusive "E" he has pursued from Paris to Rome since finding her purse in the Louvre, and learns from her that she has survived because Mardok, who had anticipated the disaster, invited her (through Signor Antonelli) to accompany him on a trip to the sea-bed in his unique diving-bell. As Evelyn reveals to Mark, this comic-book scientific bogey-man turns out to have a lust for power no less enormous than Frankenstein's obsessive compulsion to be as God to a new race of Ubermenschen, but all his plans depend on his ability to compel her participation. Evelyn has been established by Noyes as a rather high-minded young American who responds to Mardok's predictable overtures with an equally predictable revulsion:

> Signor Antonelli had warned her that this remarkable personage disliked and did not understand women. In other circumstances, if Mardok had merely praised her sense of humour she might have been flattered; but to tell her that he wanted her for his mistress because she amused him would have been altogether too Oriental in taste for a young American. In the horrible circumstances it was an atrocity. Moreover, he went on to explain that her health and excellent physique would be invaluable factors in the founding of his dynasty. Their descendants would be super-men and super-women; and, though their development would be fostered by scientific means, it was essential that they should spring from a sound mother. Cold-blooded as he seemed in his ophidian rationalism, his eyes riveted her attention as a snake is said to hold its prey spellbound; and then, with a strange passion, he began to paint the age to come as he saw it. It was to be a world from which the soul had vanished. Science and mechanism, in the hands of an autocrat, would solve all problems and control everything and everyone except the controller himself. But there were to be no more morals, or "taboos", as he called them; for science would replace the primitive inhibitions of conscience, and make it possible to enjoy many things which formerly were regarded as forbidden fruit. They would be gods, above good and evil. Religion would be abolished.
>
> The Last Man, pp.131-132.

While neither Mardok nor this utterly contrived situation would disgrace a penny-dreadful, the anxieties about rationalism which have prompted Noyes to invent this scenario are genuine, and as we have already seen in Chapter 2, are shared by more proficient writers. In reviling Mardok's 'ophidian rationalism', Noyes deliberately associates the agent of Mankind's late disaster with the infernal architect of Mankind's Fall from Edenic Grace. Whatever its failings as literature, this episode in the novel shows that Mary Shelley's scientific Faustus, with his dreams of divine power, retains a strong appeal (even to so conservative a religious outlook as Noyes's), as a potent emblem of perverse human aspiration.

After Mardok is shown in what we are supposed to accept are his true colours by his sacrilegious destruction of the altar-light which Evelyn has faithfully tended in the little church at Ravello, he makes a successful attempt to kidnap her which ends in his own death. By now Mark and Evelyn have consecrated their love in a form of matrimony which then allows them to consummate their affection decorously. True to form, Mardok is unmoved by this sort of thing and takes Evelyn from her little church. She has left clues for Mark, however, and he tracks them. Meantime, she feeds Mardok's conceit with outrageous flatteries and tricks him into becoming trapped in the Blue Grotto of Capri. When Mark arrives, they escape together. Hot in pursuit, Mardok is killed by his own bad driving - retribution, no doubt. Ironically, though, having fled towards Assissi, they discover there a surviving community of the faithful who had been at Mass in the crypt chapel of San Francesco at the fatal hour.

With Mardok dead and the lovers re-united, Noyes provides an answer for his initial 'naive question' - "fittest for what?" (p.6) -

by admitting the possibility for a new world, the emergent city of God whose citizens are, in their humility, the inheritors of the earth. The Catholic inhabitants of this new world, providentially spared the fate of their less pious fellows, are fittest, in their godliness, for the orthodox role of divine worship. As Noyes has hinted earlier, his youthful hero and heroine are no second Adam or Eve:

> "It's very odd, isn't it, that your name should be Evelyn."
> "The second syllable saves it; but do you realize that I don't know yours at all?" she said.
> "Mark Adams," he muttered, suddenly conscious, rather sheepishly, that this was odder still.
> It was now her turn to laugh; but they made a duet of it. From that moment on, in fiction, they must inevitably have begun to call each other Adam and Eve. In this more veracious history, they merely called each other Mark and Evelyn.
>
> The Last Man, pp.124-125.

Thus, Evelyn's moral fortitude in resisting Mardok, and Mark's conversion (due to her redemptive influence 18) are both rewarded by their inclusion in this new community of faith whose symbol, the Cross, epitomises for Noyes, in its mute eloquence and unique dignity, not only the antiquity of the philosophia perennia, but also its mystical complexity and abiding virtue:

> It belonged to an order of reality higher than "brute nature", an order to which at one time the spirit of man was able to aspire. Its full meaning then was too deep and universal to be expressed physically in anything but a very simple and abrupt hieroglyph. It symbolized all the real values of Christendom - chivalry towards the weak, the dignity of womanhood, the broad stone of honour, the beauty of holiness, and the splendour of that justice whose eyes are unbandaged, and whose sword is laid before the mercy-seat of God. It symbolized not worldly success, or the petty triumphs of materialistic science, but a supernatural victory accomplished, even in defeat, by "the broken heart and the unbroken word."
> In the neo-paganism of recent generations, all these things had gone....utterly out of fashion....
>
> The Last Man, p.79.

Structurally, Noyes's novel is a farrago of didacticism, acclamation of faith, and romantic thriller after Buchan (if that is not to do Buchan too great a disservice). If it has any lasting value, it is as a testament to the peculiarly bigoted, highly conservative antagonism its author felt towards modernism. In the last analysis, Noyes meant to depict the exemplary morality of Adams and Eve as bringing about a triumph for the philosophia perennia over evil, which promises a new beginning for Mankind, a spiritual rebirth succeeding the materialistic and philosophic Enlightenment which eventually spawned all the vileness of the modern world.

Each in their different ways emblematic tales of virtue rewarded, both Mrs.Penny's Dream and Noyes's religiose novel indicate quite clearly that the science fiction can be adapted to convey a devout perspective as readily as it can be used to advocate rationalistic scepticism. In this study, the fiction of other writers whose moral discourse is similarly based upon Christian ethics will be related to what may be called - reflecting its doctrinal character - "the devout tradition". 'Prometheus'(19), a story by Philip Jose Farmer is a more recent example of fiction which continues this tradition; and being replete with Farmer's wit, it well illustrates how ingenious and entertaining this sort of science fiction can be, while yet remaining thought-provoking.

The story has a setting which the casual positivism of a host of modern science fiction story and screenplay writers has made commonplace. Farmer takes us into a future when Mankind has acquired the means of travelling across vast distances of space. There are galaxies to explore, and unknown species are encountered whose unfamiliar customs challenge our own notions of intelligence and

ethics. In inventing Feral and its aliens, the author proves to have had a pleasingly consistent way with the material he has drawn from such sciences as zoology, anthropology and archaeology. Moreover, he also has fielded two credible characters in the persons of Carmody and Holmyard, whose conversations present a kind of dialectic between faith and scientific scepticism.

The protagonist, John Carmody, is a monk-explorer who is on his way to a new posting when he is beset by a female horowitz who, to his utter discomfiture, lays an egg on his chest. These horowitzes are an alien race generally presumed to be without intelligence; the one which so inconveniences Carmody is in a zoo on Earth. Her action means that Carmody is now a reluctant surrogate father to her growing offspring because the egg has become attached to his chest by means of tendrils through which the embryonic creature draws its sustenance. Soon after, Carmody finds himself seconded to a scientific expedition led by Dr.Holmyard which is studying the ecology of Feral, the native planet of the horowitzes (so named after the man who first encountered them). Holmyard's audacious plan is to have Carmody disguise himself as a horowitz and join a group of the native creatures so that their behaviour and motivation can be more fully understood by the scientists. For all his misgivings, Carmody (who is stranded there, in any case, for several months until he can be rid of his 'baby') manages to become accepted into the group. What transpires astonishes both Carmody and Holmyard.

The horowitzes, large avian creatures whose wings have atrophied so that they have come to resemble the terrestrial ostrich, inhabit a planet without mammalian species. Feral's fauna are all derived from reptilian or avian primitive ancestors, and the anthropocentric human

explorers do not expect to find any intelligent species. However, as Carmody discovers, the horowitzes do use rudimentary tools and there is a distinct tribal hierarchy within the group he is studying. These alone are not adequate evidence of the creatures' intelligence, for terrestrial avian species exhibit similar traits, among them the "pecking order". More compelling is his discovery that not only do the horowitzes possess a limited ability to speak to one another, but they are also very rapid learners. Having unwittingly allowed a youngster to overhear a radio conversation with Holmyard, he is staggered to find that the young horowitz, Tutu, has picked up a few words of English. He begins to coach Tutu and a few of her fellows in very basic English, and a means of communication is thus quickly established thanks to the creatures' remarkable capacity for learning. But Carmody is tiring, and, feeling increasingly out of his depth, requests permission from his Catholic superiors to leave, which they refuse to grant. The same message includes further interdicts:

> "They inform me that I must live up to my contract and cannot leave here until the egg is hatched. But the day my contract expires, I must leave. And, furthermore, I am not to give the horowitzes any religious instruction at all. They must find out for themselves. Or rather, they must have their peculiar revelation."
>
> Other Worlds, Other Gods, p.144.

The monk has already taught Tutu and the other young horowitzes some basic technological skills and mathematics; his request to be allowed to confer upon them the rudiments of religious belief and ethics is prompted by his awareness that his aid to the horowitzes has raised profound issues with which, in his humility, he feels ill-equipped to cope ('"I'm confronted with the theological question the Church raised some centuries before interstellar travel became possible,"' he tells Holmyard, '"At what moment did the ape become a man? At what

moment did the ape possess a soul..."'). On the other hand, Holmyard the scientist (while acting as a sort of materialistic 'devil's advocate'), supports Carmody's general endeavour of educating the horowitzes, which the monk has now decided to continue. He wishes to lead the group to a distant area possessing natural resources like iron ore, so that the horowitzes can make better use of the knowledge of fire he has conferred on them. He hopes that they will then be able to produce more efficient tools and thereby provide for a much larger community.

Carmody's long-term aim is to stabilize the population growth of the group so that they no longer have to eat the eggs of the unborn young in those times of dearth which are a consequence of their nomadic dependence on a highly variable source of food. This anthropophagic recourse of the horowitzes' strikes a horrified Carmody as an extreme form of birth control, but it is less easy to get the aliens to move than he at first imagines. In the end, he has to resort to two drastic measures to induce them leave the small settlement with its stockade and planted crops which they have laboriously constructed under his guidance. He has to force the issue by taking on the role of leader and disturbing their social structure, one which he has been at pains to preserve in view of his intention to leave. When even this proves to have been pointless, he decides on an even more radical course of action. At his request, the expedition's vessel destroys the settlement's stockade and crops with its rocket exhaust, and this demonstration of his ability to enlist the aid of apparent demons persuades the horowitzes to obey him. However, as Holmyard points out, the act possesses potentially far-reaching consequences:

"You have thrown the fear of God into them," said Holmyard.

"Now, Doc," said Carmody, "You're not suggesting that they think I am God. If I really believed that, I'd disabuse them."

"No, but they believe you're his representative. And maybe a demigod."

Other Worlds, Other Gods, p.152.

As Carmody discovers on his return, Holmyard's prediction was not far wide of the mark, for the horowitzes now treat him with a fearful, distanced respect. He responds by trying to teach them as much science as he can, a group of scribes noting down what he dictates. He describes to them the fundamentals of chemistry, physics and electrical principles, biology, and even automotive engineering, and all with diagrams. Yet while before he was able to convince himself quite easily that the know-how he was giving them would not be misapplied, now he is sure that, in the absence of any kind of ethical guide, the information he is conveying to them might easily be put to destructive uses. At another of his meetings with the expedition leader, Carmody voices these misgivings which, he acknowledges, are about the future spiritual development of the aliens:

"But what bothers me most of all is that though I've done my best to give them all I can to enable them to deal with the material universe, I've done scarcely anything to give them an ethics. And that is what I should be most concerned with."

"Let them work out their own."

"I don't want to do that. Look at the many wrong, yes evil avenues they could take."

"They will take the wrong ones, anyway."

"Yes, but they will have a right one which they can take if they wish."

Other Worlds, Other Gods, p.154

However much he might like to take Holmyard at his words, ('"Do something about it"') Carmody has his superiors' prohibition to obey. Furthermore, time is now running out, for his contract to the expedition terminates in one month (a fortnight after he is due to "give birth")

and then he must leave, perhaps having failed to lead the horowitzes to that 'Promised Land' of the valley with the iron ore.

In these last weeks of his stay on Feral, however, two important developments take place. The first is that when the chick Carmody has been sustaining does hatch, it has blue eyes rather than the brown eyes characteristic to individuals in Tutu's group. Although Carmody himself knows that the youngster's blue eyes have a different cause than that to which Tutu delightedly attributes them ('"But him have eyes just like you eyes. You make him blue eyes so us know him you son?"'), he doesn't trouble to refute it despite being surprised himself by this peculiarly symbolic legacy.

Carmody sees the second development as much more significant. The night before he is due to leave Feral, the group are resting near the valley to which he has guided them. Having slept for a time, he is awakened by a very distressed Tutu who relates this dream to him:

> "Me father come to me, and him wake me up! Him say,'Tutu, you wonder where us horowitzes go after death! Me know, because me go to the land of beyond death. It is a beautiful land; you no cry because John must leave. Some day, you see him here. Me allowed to come see you and tell you. And you must tell John that us horowitzes like mans. Us have souls, us no just die and become dirt and never see each other again.'" Other Worlds, Other Gods, p.157.

In this dream, perhaps the '"peculiar revelation"' Carmody had hoped would come to the horowitzes, there is that most profoundly moving of all prophecies, the promise of life eternal after death. Tutu insists that the experience was not a dream, but a waking vision. Furthermore, Carmody knows that he has scrupulously avoided passing on to the horowitz anything remotely suggestive of mystical beliefs such as those she has described innocently to him. This incident seems to him quite conclusive, and the monk decides - whatever his superiors have already said about it - to leave the horowitzes a parting legacy. He

assembles them in the valley which will be their new environment and before the starship arrives to take him aboard, he instructs them in the most sacred ritual:

> "Each day at noon, when the sun highest, a male or female choosed by you must do this before you and for you."
> He took a piece of bread and dipped it in the water and ate the piece, and then he said, "And the Choosed One must say so all able to hear,
> "'With this water, from which life first comed, me thank me Creator for life. And with this bread, me thank me Creator for the blessings of this world and give meself strength against the evils of life. Thanks to He."
> Other Worlds, Other Gods, p.160.

Committing the horowitzes of Feral to the care of his, and (he is now sure), their God, Carmody takes his leave of them. However, he still has to face Holmyard's shrewd, sceptical questions once aboard their vessel. Their discussion deserves to be quoted in full, to do justice to Farmer's awareness of the issues his story has raised:

> "Tell me, do you really believe that that little ceremony you instituted will keep them on the straight and narrow?"
> "I'm not all fool," said Carmody. "Of course not. But they do have correct basic instruction. If they pervert it, then I am not to blame. I have done my best."
> "Have you?" said Holmyard. "You have laid the foundations for a mythology in which you may become the god, or the son of the god. Don't you think that, as time blurs the memory of these events you initiated, and generations pass, that myth after myth and distortion after distortion will completely alter the truth?"
> Carmody stared at the dwindling globe. "I do not know. But I have given them something to raise them from beasts to men."
> "Ah, Prometheus!" breathed Holmyard. And they were silent for a long time.
> Other Worlds, Other Gods, p.161.

The recognition which Holmyard half-mockingly gives Carmody in the closing paragraph - '"Prometheus"' - is ironic but is appropriate enough. In striving to safeguard the aliens' spiritual awakening and promote their further technical progress, he both intervenes in the course of their evolution, and defies the judgement of his ecclesiastical masters. The activities of the little monk, for all their

hopeful benevolence, are every bit as 'promethean' as Frankenstein's. Yet, the essential humility, forebearance and spiritual generosity his author astutely confers on him so efface the least hint of an even vestigial self-interest that he can hardly be thought of as another Faustus. Ultimately, Carmody is not simply a technological messiah, for it is by means of the technology he shows them that they attain broader moral perspectives. Indeed, Holmyard's view is that it is that ethical system, codified in religious terms, which is the more ambiguous promethean gift:

> "...I'll see to it that your successor has no religious affiliations," said Holmyard. "Forgive me, John, if I seem anticlerical to you. But I do believe that the horowitzes, if they develop a religion, should do it on their own."
> "Then why not their speech and technology?"
> "Because those are tools with which they may deal with their environment. They are things which, in time, they would have developed on lines similar to those of Earth."
> "Do they not need a religion to ensure that they do not misuse this speech and technology? Do they not need a code of ethics?"
>
> Other Worlds, Other Gods, p.144

Whatever Carmody's intentions are, Holmyard believes that his ethical legacy will be be distorted in any case by an inevitable, pernicious deterioration; thus it will ultimately become a burden of superstition which will hamper rather than promote the further development of the alien race, perhaps by "shorting out" their own potential.

Significantly, whether or not we sympathise with the priest, and assume that the technical knowledge the horowitzes possess (and that which they will acquire) will continue to be mediated by Carmody's gentle spirituality, science and technology are not attended in this story by a neo-Gothic, sublime awe or horror. Rather, they are presented as the prerequisites of progress, creating broader moral perspectives and stimulating metaphysical (or transcendental) speculation. Science and technology are thus depicted as sources of enlightenment

rather than of an ineluctable doom in Farmer's story, and while their potential destructiveness is acknowledged, the reckless positivism or egocentricity of the Baconian visionary is completely absent. As in some finely-crafted novels of this period to be discussed later, the alien encounter generates theological or metaphysical argument about such issues as the idea that religious beliefs are products of the mythopoeic genius of primal but intelligent creatures, and whether or not such bewildering species have souls. However, to follow up the point made about Farmer's sanguine attitude to the moral ambiguity of science and technological innovation, we may consider Ray Bradbury's early short story, 'The Flying Machine'(20).

Bradbury's science fiction is, generally speaking, more evocative than literal, reflecting his penchant for tales of magic and eerie fantasy. While a significant proportion of his entire work is unmistakeably science fiction - in that it is set in the future, like Fahrenheit 451(1953) or, like The Silver Locusts(1950), deals with the exploration of space and alien encounter - it is only one aspect of his work, rather than being the mainstay of what he produces, which is usually magical or fantastic. Yet, in utilising the topoi of science fiction, Bradbury speaks with an unique voice. In 'The Flying Machine', a story written soon after two atom bombs brought the Second World War to its ominous close, the usual trappings of science fiction are foregone, but the moral concern of the writer with militarism and the disruptive impact of half-understood inventions is presented in the form of an original parable of technology. A most damning indictment is laid against the inventor of 'The Flying Machine': '"Here is the man who has made a certain machine...and yet asks us what he has created. He does not know himself. It is only

necessary that he create, without knowing why he has done so, or what this thing will do."' Scientific creativity, ordains the sage, is most dangerous when it is most self-indulgent. Essentially, Bradbury's story poses one fundamental question - is it better to preserve the status quo, or venture it upon the promise of innovation?

The early morning serenity of the Emperor Yuan is disturbed by the excited cries of his servant, who professes to have seen a miracle. The Emperor, a shrewd old man, is not impulsive. He insists that his servant share his tea while he deliberates upon this remarkable claim, and eventually condescends to go with the servant to a nearby hillock to view the flying man, where he duly sees the truth of the servant's claim for himself. The flier is called down, and the Emperor interrogates him about his invention:

> The flying man alit with a rustle of paper and a creak of reeds. He came proudly to the Emperor, clumsy in his rig, at last bowing before the old man.
> "What have you done?" demanded the Emperor.
> "I have flown in the sky, Your Excellency," replied the man.
> "What have you done?" said the Emperor again.
> "I have just told you!" cried the flyer.
> "You have told me nothing at all." The Emperor reached out a thin hand to touch the pretty paper and the bird-like keel of the apparatus. It smelled cool, of the wind.
> "Is it not beautiful, Excellency?"
> "Yes, too beautiful."
> The Golden Apples of the Sun, p.53

The unsuspecting flier accompanies the Emperor and his servant back into the fifth-century palace by the Great Wall, talking exuberantly about this first flight. Suddenly, the Emperor summons guards, and condemns the man, who is swiftly executed despite his eloquent pleading, for although the Emperor appreciates the beautiful thrill of flight, he fears '"another man"' who would misuse this wonderful machine:

"But there are times," said the Emperor, more sadly still, "when one must lose a little beauty if one is to keep what little beauty one already has. I do not fear you, yourself, but I fear another man."

"What man?"

"Some other man who, seeing you, will build a thing of bright papers and bamboo like this. But the other man will have an evil face and an evil heart, and the beauty will be gone. It is this man I fear."

"Who? Why?"

"Who is to say that someday just such a man, in just such an apparatus of paper and reed, might not fly in the sky and drop huge stones upon the Great Wall of China?" said the Emperor.

No one moved or said a word.

"Off with his head," said the Emperor.

The executioner whirled his silver ax.

The Golden Apples of the Sun, pp.54-55

Consoling himself with the thought, '"What is the life of one man against those of a million others?"' the Emperor acts to peserve the peace and contentment of his people, and the invention perishes with its maker. Yet given the 400 A.D. setting, the implicit answer to Bradbury's fundamental question ('Progress or the status quo?') is that the progressive urge cannot be stifled forever.

At its best, Bradbury's science fiction is both ingenious and subtle. However, more frequently science fictional tricks simply provide the speculative setting. The authentic voice of Bradbury's work is rapturous, as in his millenarist poem 'Christus Appollo' which anticipates the Second Coming of Christ after the long Eighth Day of Man and the Eighth Day of God:

We cargo holy flesh
On stranger visitations,
Send forth angelic hosts,
To farflung worlds
To tell of our walking on the waters of deep Space,
Arrivals, swift departures
Of most miraculous man
Who, God fuse-locked in every cell
Beats holy blood
And treads the tidal flood
And ocean shore of Universe,

A miracle of fish
We father, gather, build and strew
In metals to the winds
That circle Earth and wander Night beyond all Nights,
We soar, all arch-angelic, fire-sustained
In vast cathedral, aery apse, in domeless vault
Of constellations all blind dazzlement.

Christ is not dead
Nor does God sleep
While walking Man
Goes striding on the Deep

To birth ourselves anew
And love rebirth
From fear of straying long
On outworn Earth.
One harvest in, we broadcast seed for further reaping.
Thus ending Death
And Night,
And Time's demise,
And senseless weeping.

21.

His moral concern and lyrical anticipation of a millenium in which humane technology supports the full flowering of human spirituality is much in the same vein as the vision of his eminent peer Aldous Huxley, who encouraged Bradbury to write poetry and who himself later wrote in his last book, Literature and Science(1963), that 'Man cannot live by contemplative receptivity and artistic creation alone. As well as every word proceeding from the mouth of God, he needs science and technology.'

Brave New World and Walden Two; Twin Visions of the City of Man.

While Farmer's 'Prometheus' may present a more evenly balanced view of science, it is clear that for writers like Mrs. Penny and Alfred Noyes science is the means whereby materialism and amorality are advanced in society. Both include images of societies wholly given over to pleasure-seeking, and both are quite certain that science is at the root of the social changes - especially in morality

- which have encouraged a great many people to prefer the pursuit of self-indulgence to religion.

Mrs. Penny's story depicts moral decline in terms of the mass desertion of religion and focusses on drunkenness as the very worst outward sign revealing the faithlessness and wantonnness within. She also notes that the majority of people, being 'the slaves of habit', found consolation and defiance in the bottle: 'he had but to turn his eyes from the doors of the church to the many ostentatious buildings where the incentives to drunkenness were sold....Never were these temples of iniquity thronged by such an incessant succession of votaries; never was the excitement of intoxication so generally sought.' Alfred Noyes also associates a decline in public and private morality - reflected in the extravagant behaviour and self-indulgence of so many - with materialism and rationalism.

Aldous Huxley, Noyes's contemporary, explores this meeting-point of social change and ethics in four science fiction novels. The first two, Brave New World(1932) and After Many a Summer Dies the Swan(1939) antedate The Last Man and reveal a different attitude toward science than the others, Ape and Essence(1949) and Island(1962), both of which reflect post-war dissatisfaction with 'Progress' and simple materialism.

Huxley's first science fiction novel, an extrapolative satire, is certainly the best known and arguably the most audacious of the four. Huxley's sardonic "utopia" is a projection of the contemporary influence of scientific materialism on society. It offers an interesting contrast to B.F.Skinner's Walden Two(1948), a more conventional utopia. Moreover, since Skinner follows Huxley's example and provides a discussion of his equally controversial novel ('Walden

Two Revisited';1976) any examination of these novels can exploit the explicit statements made by their authors. More importantly, as it will become apparent, both authors seem to share a view that what Huxley called 'the sciences of matter' be accorded a supremacy over 'the sciences of life'. In the long term, an unbalanced emphasis on materialism will produce a world in which forces no longer controllable by individuals will determine quality of life and ethics. Huxley poses the question in 1932 of the form the future we create should take and explicitly rephrases it again in 1946; Skinner suggests a "wholesome" answer - Walden Two - the balanced, rationalistic society he described in 1948.

Brave New World is a memorable novel (22). Huxley wrote in a foreword penned some fourteen years later ('Brave New World Revisited', 1946 23) that 'its defects as a work of art are considerable', but that he had resisted the temptation to change it lest its faults be improved at the cost of its merits. Huxley was equally unambiguous about what he wished to deal with in the novel, stating in this foreword that, 'The theme of Brave New World is not the advancement of science as such; it is the advancement of science as it affects human individuals.' This theme is worked out in two distinct ways: the projection of a plausible image of a society dedicated to, and built upon, the obsessive fulfillment of appetite; and, the delineation of a conflict between materialism and a more traditional humanism which Huxley personifies in the (noble) Savage, John. Clearly, Huxley's highly original vision of the world as it would be in the year A(fter) F(ord) 632 has a place in any discussion of how modern novelists have explored these controversial issues, not least because Huxley's 'utopia' is partly a deliberate satire on

Wells's Men Like Gods of 1923, the archetypal scientific, materialist utopia of modern (as distinct from post-modern) science fiction.

We have seen how a decade later in 1942 Noyes depicts the contemporary world as a godless Babylon doomed by its own ethical shallowness and utilitarianism, '"It had lost the religion of Christendom. You could see the tragedy of it in my own country, by picking up any book that gave a realisitic picture of young America in its cups. It was more or less the same all over the world; degradation; brutality; and cheap insidious propaganda against every code of honour in private life....they were convinced that 'morality' itself was as out-of-date as the novels of Charlotte M. Yonge."' asserts his redemptive heroine Evelyn, whose rather priggish views are endorsed readily by Mark ('"Exactly."'). However, this rhetorical condemnation of worldliness of the times already had been surpassed by Huxley's more graphic depiction of a world in which the sole aims of life are consumption ('Ending is better than mending. The more stitches, the less riches.') and hedonism:

> Lenina shook her head. 'Somehow,' she mused, 'I hadn't been feeling very keen on promiscuity lately. There are times when one doesn't. Haven't you found that too, Fanny?'
> Fanny nodded her sympathy and understanding. 'But one's got to make the effort,' she said sententiously, 'one's got to play the game. After all, everyone belongs to everyone else.'
>
> Brave New World, p.45.

Christianity has foundered in the five centuries or so between this global society (whose triple axiom COMMUNITY, IDENTITY, STABILITY reflects its three governing principles) and ours in which Christian ethics are given such a prominent and influential place. As the Controller, his Fordship Mustapha Mond explains to a group of awe-struck students, 'There was a thing, as I've said before, called Christianity. ...All crosses had their tops cut and became T's. There was also

a thing called God.'(pp.52-53) Of course, Huxley goes further than simply predicting the demise of Christianity in this agnostic society, this futurist 'paradise'.

Although the Christian God is of no more account in Brave New World than in Walden Two, Huxley's satire is not strictly godless, for religion has not been abolished, as Mardok might have wished. Much else he would have swept away has been, though, suggesting that Noyes knew of Huxley's first sustained attempt at science fiction(24). As Orwell would in 1949, Huxley presents a religion which in many ways is a savage inversion of Christian values. As Mond further explains, 'We have the World State now. And Ford's Day celebrations, and Community Sings, and Solidarity Services. ...There was a thing called Heaven; but all the same they used to drink enormous quantities of alcohol. ...There was a thing called the soul and a thing called immortality. ...But they used to take morphia and cocaine.' In this future, Huxley decides they will take soma, which has 'All the advantages of Christianity and alcohol; none of their defects.' The World State also has a secular surrogate for the discredited religion, ostensibly to preserve whatever personal and social rewards accrue from religious experience. But Huxley's real intention is to shock: these 'advantages', as Mustapha Mond terms them, are gained from participation in 'religious' rituals of a quite pagan licentiousness. Take for instance the Solidarity Service (perhaps an orgiastic forerunner of the Two Minutes' Hate?) which Bernard Marx attends (on 'alternate Thursdays') in Chapter V. Here we are graphically shown how the Controllers solve the problem of, as he later put it, 'making the people love their servitude' by exploiting religion:

> And all at once a great synthetic bass voice boomed out the words which announced the approaching atonement and

> final consummation of solidarity, the coming of the Twelve-in-One, the incarnation of the Greater Being. 'Orgy-porgy,' it sang, while the tom-toms continued to beat their feverish tattoo:
>
> Orgy-porgy, Ford and fun,
> Kiss the girls and make them One.
> Boys at one with girls at peace;
> Orgy-porgy gives release.
>
> 'Orgy-porgy,' the dancers caught up the liturgical refrain, ...In their blood-coloured and foetal darkness the dancers continued for a while to circulate, to beat and beat out the indefatigable rhythm. 'Orgy-porgy....' Then the circle wavered, broke, fell in partial disintegration on the ring of couches which surrounded - circle enclosing circle - the table and its planetary chairs. 'Orgy-porgy...' Tenderly the the deep voice crooned and cooed; in the red darkness it was as though some enormous negro dove were hovering benevolently over the now prone or supine dancers.
> Brave New World, p.75.

With this drug-heightened ritual of atavistic sexual congress, Huxley explicitly rededicates religion to that very promiscuity Fanny and Lenina discuss so matter-of-factly. Perhaps this defamatory association of religion with flagrant fornication is, notwithstanding the extinction of the philosophia perennia, or the lack of the least hint of an improving moralitas, of all things that most likely to outrage a conservative Christian sensibility:

> Perhaps the most sustained and, for some, the bitterest irony occurs in the delineation of the Solidarity Service, which, of course, parodies Holy Communion, perhaps at a Revival meeting. The significance of twelve in each group, of holding the service on Thursday, of the invocations -- "I drink to my annihilation" and "I drink to the imminence of his Coming." -- is obvious.... Notice the echo of Anglican and Presbyterian hymns throughout the service; notice the despair Bernard feels when he 'foresaw for himself yet another failure to achieve atonment.' How out of place seems the word atonement. 25.

Indeed there is in all this excessive sybaritism a great deal of irony, for paradoxically, Brave New World is more about repression than licence. However provocative or diverting it may seem, Huxley's main intention is not to purvey salaciousness for its own sake, but to present a plausible vision of how a 'soft' consumerist totalitari-

anism would function, as is clear from his retrospective discussion:

> There is, of course, no reason while the new totalitarianisms should resemble the old. Government by clubs and firing squads, by artificial famine, mass imprisonment and mass deportation, is not merely inhumane (nobody cares much about that nowadays); it is demonstrably inefficient - and in an age of advanced technology, inefficiency is the sin against the Holy Ghost. A really efficient totalitarian state would be one in which the all-powerful executive of political bosses and their army of managers control a population of slaves who do not have to be coerced, because they love their servitude. To make them love it is the task assigned, in present-day totalitarian states, to ministries of propaganda, newspaper editors and schoolteachers. But their methods are still crude and unscientific.
> ...The most important Manhattan Projects of the future will be vast government-sponsored inquiries into what the politicians and the participating scientists will call 'the problem of happiness' - in other words, the problem of making the people love their servitude.
> ...The love of servitude cannot be established except as a result of a deep, personal revolution in human minds and bodies. 'Brave New World Revisited', pp.12-13.

Like Noyes a decade later - but to completely different effect - Huxley presents religion as being the central, organising structure of the other values of the society. Yet, however important, it is only one aspect of Huxley's complex projection.

Huxley postulates that a society committed in this way to luxury and the gratification of the senses will require to be stratified socially with the aspirations of the individual quite strictly circumscribed, where not ordained utterly. But this regimentation is surreptitious, for only by managing the desires of the individual, can the State be confident of ensuring that they are fulfilled. One means of achieving this is to create the individual; and in Brave New World this is effected by a combination of strict population control (all women who might become mothers wear a 'Malthusian belt' replete with contraceptives); a form of cloning (anticipated by Huxley as the 'Bokanovsky process'); carefully controlled gestation in vitro rather than in utero (producing 'bottle' babies who are not born, but

'decanted'); and, behavioural conditioning involving aversion therapy, hypnopaedia and instilling a greater or lesser degree of soma-dependence. This formidable array of scientific techniques (which would be the envy of another Frankenstein) produces the optimal social mix: enough Epsilons and Deltas to do the most menial work, and the appropriate number of Gammas, Betas and Alphas to ensure that consumer demand never flags, but is always balanced:

> At the end of the room a loud-speaker projected from the wall. The Director walked up to it and pressed a switch. '...all wear green,' said a soft but very distinct voice, beginning in the middle of a sentence, 'and Delta children wear khaki. Oh no, I don't want to play with Delta children. And Epsilons are still worse. They're too stupid to be able to read or write. Besides, they wear black, which is such a beastly colour. I'm so glad I'm a Beta.'
>
> There was a pause; then the voice began again. 'Alpha children wear grey. They work much harder than we do, because they're so frightfully clever. I'm really awfully glad I'm a Beta, because I don't work so hard. And then we are much better than the Gammas and Deltas. Gammas are stupid. They all wear green, and Delta children wear khaki. Oh no, I don't want to play with Delta children. And Episilons are still worse. They're too stupid to be able...'
>
> The Director pushed back the switch. The voice was silent. Only its thin ghost continued to mutter from beneath the eighty pillows.
>
> They'll have that repeated forty or fifty times more before they wake; then again on Thursday, and again on Saturday. A hundred and twenty times three times a week for thirty months. After which they go on to a more advanced lesson.' Brave New World, p.33.

The result - COMMUNITY, IDENTITY, STABILITY bolstered by pleasure, which replaces the nightmarish mass deprivation endured by the workers of Fritz Lang's Metropolis and Orwell's Nineteen Eighty-four, and deprives the masses in the Brave New World of a reason for the revolutionary confrontation which arises in Jack London's The Iron Heel and Vonnegut's Player Piano. Indeed, the world of A.F.632 is the result of a historical process in which such possibilities (represented, with a touch of Huxley's characteristic sportiveness, by the culture fans and the Simple Lifers) have been assimilated or

suppressed in the aftermath of a terrible war: 'The Nine Years' War, the Great Economic Collapse. There was a choice between World Control and destruction. Between stability and...'(p.48) As Mustapha Mond further explains in the third chapter, the society of which he is Controller is the product of deliberate management by his predecessors: 'In the end...the Controllers realized that force was no good. The slower but infinitely surer methods of ectogenesis, neo-Pavlovian conditioning and hypnopaedia...Accompanied by a campaign against the Past; by the closing of museums, the blowing up of historical monuments....by the suppression of all books published before A.F.150.'(collated from pages 48-50) The consolidation has included only selected elements of the past such as Henry Ford's consumer-oriented, mass production technology and the latest developments in such disciplines as Freudian psychology and bioengineering. As for the rest, 'History is bunk' asserts Mond (quoting Ford for authority 26), and in a rare intervention, Huxley's narrative voice describes the old world which has produced this over-blown orchid, the philistine culture of Our Ford and Our Freud:

> 'Stability,' said the Controller, 'stability. No civilization without social stability. No social stability without individual stability.' His voice was a trumpet. Listening, they felt larger, warmer.
>
> The machine turns, turns and must keep on turning - for ever. It is death if it stands still. A thousand millions scrabbled the crust of the earth. The wheels began to turn. In a hundred and fifty years there were two thousand millions. Stop all the wheels. In a hundred and fifty weeks there are once more only a thousand millions; a thousand thousand thousand men and women have starved to death.
>
> Wheels must turn steadily, but cannot turn untended. There must be men to tend them, men as steady as the wheels upon their axles, sane men, obedient men, stable in contentment.
>
> Crying: My baby, my mother, my only, only love; groaning: My sin, my terrible God; screaming with pain, muttering with fever, bemoaning old age and poverty - how can they tend the wheels? And if they cannot tend the wheels... The corpses of a thousand thousand thousand men and women would be hard to bury or burn. Brave New World, p.44.

Huxley's main point is that for all Mond's insistence on its historical necessity, the world which succeeded the crisis-ridden world of the early twentieth century is not sane. In the second part of his novel, which begins with Lenina and Bernard Marx's visit to the Savage Reservation, he explicates this by providing another cultural perspective to counter the assumptions and cant of the Brave New World.

John, retrieved by Marx from the reservation for his own ends, has had none of the 'advantages' conferred by growing up in England in the seventh century A.F. Instead, John has had to cope with being the despised son of Linda, stranded in the Reservation by an unscrupulous lover (he, incidentally, is now Marx's boss at the Central London Hatchery and Conditioning Centre). Linda herself has been held in universal contempt in the Reservation for her Our Freudian promiscuity and Our Fordian appetite for the disposable and the fashionable. John provides a contrasting moral sensibility to further illustrate, and thus deprecate, the workings of the 'Brave New World', as John, who has taught himself to read from The Complete Works of William Shakespeare and The Chemical and Bacteriological Conditioning of the Embryo, calls the amazing community into which he is brought at Mustapha Mond's direct command. To the Alphas, Betas and Gammas John is simply 'the Savage', a freak, an amusing spectacle born obscenely - 'viviparously'. Nonetheless he becomes a disturbing presence because, whatever its strange provenance, his is an essentially moralistic sensibility which is at first bewildered, then outraged, by the values of the people of Our Ford, with their everyday philistinism and self-indulgent childishness ('Adults intellectually and during working hours....Infants where feeling and

desire are concerned,' declares Marx, whose infatuation with Lenina makes him more and more disaffected with the ephemeral nature of human relationships in his own society.) For all his early hopes, John cannot take to their way of living, as Lenina discovers to her bewilderment; and Huxley steps in to describe his isolation: 'In the taxicopter he hardly even looked at her. Bound by strong vows that had never been pronounced, obedient to laws that had long since ceased to run, he sat averted and in silence. Sometimes, as though a finger had plucked at some taut, almost breaking string, his whole body would shake with a sudden nervous start.'(p.138) John's moral outlook may not be Christian but it does include a few traditional virtues which of course only serve to convince the scornful, effete hedonists who now surround him that his soubriquet, 'the Savage', is wholly appropriate.

John eventually erupts when he is maddened by the casual way in which Linda is allowed to kill herself with the soma she has longed for while an unwilling resident in the Reservation, a grim place in New Mexico where the brutality of the Indians' religious worship of Jesus and Pookong reflects the primitiveness and violence of their way of life. John goes on the offensive against a social system which he now realizes exploits the material aspects of life in order to repress or subvert its spiritual or metaphysical side. Aided by Helmholtz Watson (but not by a prevaricating, craven Marx), he causes a riot by trying to liberate a group of Delta workers from the soma ration with which their toil is rewarded. 'Do you like being slaves?' he rails at them, 'Do you like being babies? Yes, babies. Mewling and puking...'(27)

> The insults bounced off their carapace of thick stupidity; they stared at him with a blank expression of dull and sullen resentment in their eyes. 'Yes, puking!' he fairly shouted. Grief and remorse, compassion and duty - all were forgotten now and, as it were, absorbed into an intense overpowering hatred of these less than human monsters. 'Don't you want to be free and men? Don't you even understand what freedom and manhood are?' Rage was making him fluent; the words came easily, in a rush. 'Don't you?' he repeated, but got no answer to his question. 'Very well, then,' he went on grimly. 'I'll teach you; I'll make you free whether you want to or not.' And pushing open a window that looked on to the inner court of the Hospital, he began to throw the little pill-boxes of soma tablets in handfuls out into the area.
>
> Brave New World, p.171.

The three are arraigned before Mustapha Mond, and it last becomes clear to John that science has made the system unassailable. In this penultimate episode, Huxley embarks on a sustained discursive examination of the relationship between science, religion and social stability.

Naturally, the urbane Mond has all the answers. Liberty is relative; people, even the helot Deltas and Epsilons, are content to accept a limited horizon if their limited aspirations are all they have ever possessed. Not everyone can be an Alpha, after all, for as the Cyprus Experiment has shown, such visionaries, dreamers and seekers after knowledge are not particularly skilled at providing for themselves or disposed to consensus. 'The optimum population,' he asserts, 'is modelled on the iceberg - eight-ninths below the water line, one ninth above.' What about the menial work the Deltas and Epsilons unprotestingly carry out to support their privileged masters? Mond answers John by admitting that while it would be possible to improve it, they would be so burdened by their extra leisure time that they would merely consume more soma: 'The Invention Office is stuffed with plans for labour-saving processes. Thousands of them.' Mustapha Mond made a lavish gesture. 'And why don't we put

them into execution? For the sake of the labourers; it would be sheer cruelty to afflict them with excessive leisure.' More importantly, such a change would carry with it the risk of upsetting the whole apple-cart; and in a revelation which astounds even Helmholtz Watson, Mond exposes how contrived and deceptive is the popular faith ('It's a hypnopaedic platitude' points out Watson) in scientific progress:

> 'Every change is a menace to stability. That's another reason why we're so chary of applying new inventions. Every discovery in pure science is potentially subversive; even science must sometimes be treated as a possible enemy. Yes, even science.' .....
> 'It isn't only art that's incompatible with happiness; it's also science. Science is dangerous; we have to keep it most carefully chained and muzzled.'
> Brave New World, pp.180 & 181 (abridged).

It is in order to preserve that cherished stability that Marx and Watson must be banished, though, as Mond makes clear, for all Marx's terror of leaving his familiar surroundings, their exile has held attractions - long since disavowed - even for him. In symbolic terms, if the Savage Reservation is a mundane kind of Purgatory whose denizens are obsessed with ritual expiation of the sin of their existence, then the self-regulating, stiflingly-homeostatic global society is a man-made Limbo, as free of geniune experience as it is empty of pain. This is not a full triptych, however; for Heaven is not delineated, only alluded to by quasi-Mephistopheles Mond as the bright prospect he had declined in favour of his preferred role as keeper of the gates, with all the sweeping temporal power it has brought him. Mond, who has exchanged his soul for power, is in fact another Faustus:

> 'One would think he was going to have his throat cut,' said the Controller, as the door closed. 'Whereas, if he had the smallest sense, he'd understand that his punishment is really a reward. He's being sent to an island. That's to say, he's being sent to a place where he'll meet the most interesting set of men and women to be found anywhere in the

> world. All the people who, for one reason or another, have got too self-consciously individual to fit into community-life. All the people who aren't satisfied with orthodoxy, who've got independent ideas of their own. Everyone, in a word, who's anyone. I almost envy you, Mr.Watson.'
>
> Brave New World, p.182.

Conventional wisdom has it that the most effective satire is launched from a moral stance which, even when implicit, is nonetheless systematic and carries conviction. Mond's appreciative observations about the islands where the non-conformists are sent to dwell among kindred spirits ('the most interesting set' of people in the world) further confirms the line of Huxley's satiric argument, which again anticipates Leavis's, this time in terms of the need for a modern society to entrust the preservation and onward transmission of important cultural values to an elite of luminaries. For Leavis the university is the fittest repository of this important trust; Mond allows it to be developed by the banished thinkers in a sociocultural laboratory vessel.

After Helmholtz Watson has chosen (with what sublime, unwitting irony!) the Falkland Islands as a place of exile where he will write better because the climate is bad, John and Mond are left to discuss the issues further. John again demands that the Controller explain his reasoning when, having acknowledged that both art and science have been sacrificed, Mond admits that revealed religion too is part of the price of stability. One reward for choosing to manage, rather than desert his community is arcane knowledge of prohibited ideas and books such as The Imitation of Christ and The Holy Bible ('A whole collection of pornographic old books...God in the safe and Ford on the shelves.') When John indignantly asks why this knowledge is not freely available, Mond first asserts that while God may not change, the religions of mankind are relative, being deeply bound up with

what people need at the time; then, after quoting favourable passages from Cardinal Newman and Maine de Biran, he adopts John's characteristically Shakespearean idiom momentarily to propound his most telling argument for the redundancy of Christianity:

> 'One of the numerous things in heaven and earth that these philosophers didn't dream about was this' (he waved his hand), 'us, the modern world. "You can only be independent of God while you've got youth and prosperity; independence won't take you safely to the end." Well, now we've got youth and prosperity right up to the end. What follows? Evidently, that we can be independent of God. "The religious sentiment will compensate us for all our losses." But there aren't any losses for us to compensate; religious sentiment is superfluous.
>
> .....
>
> What need have we of repose when our minds and spirits continue to delight in activity? of consolation, when we have soma? of something immovable, when there is the social order?'
>
> Brave New World, p.187.

The ironic paradox is that, just as Noyes required, Mond and everyone else do share a 'definite belief', but in the permanence of the State, and in the desirability of what it offers them, rather than in Providence. For all John's naive questioning about God and his advocacy of self-denial, chastity and 'living dangerously', the 'religious sentiments' of this global community are directed to, and fulfilled by, the surrogate, orgiastic worship of Our Ford. True to form, John remains unconvinced by Mond's relativistic arguments, and ends by reclaiming his independence:

> 'But I like the inconveniences.'
>
> 'We don't,' said the Controller. 'We prefer to do things comfortably.'
>
> 'But I don't want comfort. I want God, I want poetry, I want real danger, I want freedom, I want goodness. I want sin.'
>
> 'In fact,' said Mustapha Mond, 'you're claiming the right to be unhappy.'
>
> 'All right, then,' said the Savage defiantly, 'I'm claiming the right to be unhappy.'
>
> 'Not to mention the right to grow old and ugly and impotent; the right to have syphilis and cancer; the right to have too little to eat; the right to be lousy; the right to

> live in constant apprehension of what may happen tomorrow; the right to catch typhoid; the right to be tortured by unspeakable pains of every kind.'
>
> There was a long silence.
>
> 'I claim them all,' said the Savage at last.
>
> Mustapha Mond shrugged his shoulders. 'You're welcome,' he said.
>
> Brave New World, p.192.

John resists this catalogue of temptations and blandishments, but, now the subject of Mond's 'experiment', he is not permitted to leave with Watson and Marx. His integrity drives him into a self-willed exile - seclusion in a disused lighthouse tower. There he tries to become wholly self-sufficient, but instead rediscovers his personal well-spring of guilt; and his violent, obsessive mortification of the flesh brings out mass media reporters, duly followed by hordes of spectators. Even in his hermitage, the reclusive savage remains more of a freak than a celebrity. Though he has a broader ethical perspective than the moral tunnel-vision of those who mock him, his self-destructiveness disproves any assumption that he is sane and they are not. As Huxley later confirms in his foreword, 'The people who govern the Brave New World may not be sane (in what may be called the absolute sense of that word); but they are not mad men...'

John may engage our sympathy to a greater extent than any other figure in the novel does, but Huxley does not require us to accept his perspective as the definitive moral sensibility any more than he would have us concur with the aloof, sardonic Mond, who has now emerged as John's jailer. Huxley's is a satirical rendering of this problem, and as I read it, his point is made when John's failure becomes clear at the end of the novel. For when this savage, would-be liberator at last finds the messianic role he has craved, the people of Our Ford and Our Freud not only reject him and his message, but they (unlike Mond, the advocatus diaboli) cannot even begin to

comprehend him. His values are certainly deeper than those of his tormentors, but, by their standards, their lives are appreciably more comfortable and rewarding - and, almost without exception, uniformly stable, utterly secure.

> Amid this human debris it is perhaps tempting to call the Savage heroic and feel he represents Huxley's point of view. To do so exposes our own conditioning rather than a close reading of the text. In any society in which he attempted to live, the Savage would commit suicide; even had he lived as a solitary in the hills near Malpais or at the lighthouse, eventually he would have tortured himself to death.
> 28.

Though Thomas Clareson may be placing an exaggerated emphasis on the psychological in attributing the Savage's suicide simply to the inevitable wish-fulfillment of a masochist trying to cope with an awesome Oedipal complex, he is right to eschew reading Huxley's attitudes into his abject protagonist. So what, if anything, does Huxley express in his extravagant masterpiece? John's death is not so much a sacrificial, Christ-like act of redemption for a depraved world, as a poignant if demented recognition of the futility of his short-lived attempt to reinstate old-world values; and, as a fulfillment of Huxley's premises, it forcefully demonstrates the opinion he then held that 'sanity is impossible'. The power of Huxley's novel is that it presents a plausible depiction of how science can be exploited - in the majority interest, naturally - to disguise how pointless life can be in modern consumer society. As Harold L.Berger has noted(29), the citizens of the Brave New World are unable to recognize the extent to which their dependence has diminished their essential humanity: they seem "less than human."

In contrast to Huxley's depiction of the demented world which scientific materialism can give rise to, B.F.Skinner's Walden Two(30) is a description - in fact virtually a prototype - for what he

envisages as a rationalistic 'Golden Age'. As his principle spokesman, Frazier, emphasises to Burris and Castle, two visiting academics, Skinner believes that the means to create a modern ideal community already exist:

> "...I'm referring to a detail which distinguishes Walden Two from all the imaginary Utopias ever dreamed of. And a very simple thing, too." He continued to look at us, but we were completely at sea.
>
> "Why, the fact that it exists right here and now!" he announced at last. "In the very midst of modern civilization!" He watched for the effect upon us, but it could not have been very marked.
>
> "The Utopias have tended to be a bit out of things," said Castle at last, a little doubtfully, but beginning to get the point.
>
> "Out of things! I should say! Why, 'Utopia' is Greek for 'nowhere,' and Butler spelled 'nowhere' backwards! Bacon chose a lost Atlantis, and Shangri-La is cut off by the highest mountains in the world. Bellamy and Morris felt it necessary to get away by a century or two in the dimension of time. Out of things, indeed! It's the first rule of the Utopian romance: 'Get away from life as we know it, either in space or time, or no one will believe you!'
>
> "The one fact that I would cry from every housetop is this: the Good Life is waiting for us - here and now!...It doesn't depend on a change in government or on the machinations of world politics. It doesn't wait upon an improvement in human nature...." Walden Two, pp.179-180.

The 'Good Life' Frazier has established in Walden Two is another version of the same utopian heresy, the scientific earthly paradise. The citizens have the benefit of a model educational and welfare system, in return for a minimum of Adamic toil which they may arrange to suit themselves. Their time is otherwise their own, and is spent in a variety of community and cultural pursuits: '"The Good Life also means a chance to exercise talents and abilities. And we have let it be so. We have time for sports, hobbies, arts and crafts, and most important of all, the expression of that interest in the world which is science in the deepest sense. It may be a casual interest in current affairs or in literature or the controlled and creative efforts of the laboratory - in any case it represents the unnecessary

and pleasurably selective exploration of nature."'(p.148) Walden Two is no frantic Brave New World, but however different their conclusions about where modern scientific materialism will take the world, Huxley and Skinner begin with similar premises.

Significantly both Brave New World and Walden Two have neither a Wellsian "friend to little children above the sky" or a Providential, Christian God; in their different ways, they are both about what their authors consider to be(31) a credible picture of the absolute capability of rational Man. To Frazier, the founding genius of Skinner's behaviourist community, Jesus is no more than an early pioneer of their science:

> "We've all seen countless instances of the temporary use of force, but clear evidence of the effect of not using force is rare. That's why I insist that Jesus, who was apparently the first to discover the power of refusing to punish, must have hit upon the principle by accident. He certainly had none of the experimental evidence which is available to us today, and I can't conceive that it was possible, no matter what the man's genius, to have discovered the principle from casual observation."
> "A touch of revelation, perhaps?" said Castle.
> "No, accident. Jesus discovered one principle because it had immediate consequences, and he got another thrown in for good measure." Walden Two, p.245.

When Frazier speaks of "the experimental evidence which is available to us today", he does not simply mean that centuries of Progress have provided a scientific approach which Jesus did not have. Frazier's reference is more immediate, for like Huxley, Skinner takes us into Walden Two in order to persuade us of the consistency of his speculations; the community Frazier has founded is repeatedly advanced as an experimental proof. Thus, Skinner's description of his Utopia substantiates his argument in the same graphic manner as Huxley's depiction of the consumer 'paradise' of the future adds force to his very different conclusions. Sadly Skinner failed to foresee how his

earnest book would be received(32).

In fact, one does not have to look very deeply into Walden Two to discern its many correspondences with Huxley's earlier Brave New World (here and there Skinner even makes ironic allusions to it). Skinner's Planners perform a very similar role to Huxley's Controllers in regulating society; and Frazier himself echoes Mond's Fordian disregard for history, which is '"...honored in Walden Two only for entertainment. It isn't taken seriously as food for thought."' (p.106). More elliptically, Frazier seems again to follow Mond in asserting that '"Governments which use force are based upon bad principles of human engineering."'(p.181).

If on this basis the novels could seem almost complementary, important differences separate them. Perhaps the most noteworthy success of Huxley's novel is his anticipation of how scientific social engineering, hand-in-hand with scientific consumer manufacturing, can usher in a new human era of stability and fulfillment. Of course, Huxley's approach is ironic; in his perverse golden age, stability really means covert repression and fulfillment is reduced to a compulsive gratification, allegations which in Walden Two are made by Castle, to be rejected by Frazier. Conversely, Skinner is earnest about the benefits of scientific social engineering (which he later calls 'the design of cultural practices'), and his purpose, crucially, is to show that sanity is possible - 'Something like a Walden Two would not be a bad start,' he concludes.

Skinner's technique is deliberately straightforward: Burris, an academic psychologist, and Castle, a philosopher, accompany four young people who are going to see Walden Two. They have been invited by Frazier, a former student of Burris. The novel spans a week or so,

during which the reader is allowed to share Burris's thoughts about what the visitors see, but more importantly, what they discuss. While Castle, shrewd and not a whit less disputatious than Frazier, acts as devil's advocate, Burris is privileged to act as a sort of arbiter whose values and responses are made known to the reader. Given his reserve and self-awareness, his conclusions are meant to seem more measured than Castle's; and, since he is the most engaging of the three main characters, we are presumably meant to accept his decision to join Frazier's community.

All the same, since he is more interested in getting his message across than in entertaining, Skinner's fiction generally has more to do with philosophical arguments than character, incident or feelings. Politics, sociology, psychology, economics, and to a lesser extent, engineering, art and building technology dominate Frazier's 'exposition', as even he calls it. The same is true of the supporting narrative episodes with which Frazier's harangues and lectures are illustrated; the style is distinctively that of his acknowledged nineteenth-century predecessors: Morris, Bellamy and Butler. Whatever drive or narrative force the novel possesses is derived from the exchanges between Frazier, Castle and Burris, supported by two perfunctory attempts at a 'human interest' sub-plot. The first concerns Frazier, who is depicted as strangely sullen and irritable from time to time, whereas the other is a merely conventional depiction of the relationships between the four young people. Both situations are exploited for whatever slight suspense or interest they hold. Clearly Walden Two is above all a behaviourist manifesto, and as such, it is perhaps best discussed at the level of Skinner's theories, which are now well-known. A main theme (recalling Thoreau) is the need to opt

out of a socio-economic and political system which, Frazier insists, is unscientific and hence inefficent:

> "I'm not arguing for no government at all, but only for none of the existing forms. We want a government based on a science of human behaviour. Nothing short of that will produce a permanent social structure. For the first time in history we're ready for it, because we can now deal with human behaviour in accordance with simple scientific principles. The trouble with the program of anarchy was that it placed too much faith in human nature. It was an offshoot of the philosphy of perfectionism."
>
> "But you yourself seem to have unbounded faith in human nature," I said.
>
> "I have none at all," said Frazier bluntly, "if you mean that men are naturally good or naturally prepared to get along with each other. We have no truck with philosophies of innate goodness - or evil, either, for that matter. But we do have faith in our power to change human behavior. We can make men adequate for group living - to the satisfaction of everybody. That was our faith, but now it's a fact."
>
> Walden Two, p.182.

Walden Two, with its free love and atheism, may seem to be an explicitly materialistic promotion of the idea of Man at the expense of that of God. Yet it is not an amoral community, as Skinner explains to Castle, a traditionalist: '"I'm not going to be trapped into taking a pragmatic view of morals....Moral law would be moral law even if a mechanistic view of human behavior proved to be more expeditious in achieving the Good Life."'(p.161) Rather, as Castle anticipates, the Walden Code by which the inhabitants live is, from Frazier's point of view, '"an experimental ethics ....worked out for the common good"'; a relativistic, existentialist system in which the revealed truths of religion are accorded very little significance. In fact Skinner - unlike Huxley - takes pains not simply to parody Christianity, but, as far as is consistent with his principles, to assimilate it selectively, as the Sunday 'services' demonstrate; these are preserved for their therapeutic and recreational value, rather than ecclesiastical virtue.

Of course, the weakness in Frazier's "experiment" is its systematic basis, one indeed to which social conformity is as indispensable as it would be in any Huxleyan Brave New World. Yet, recalling Huxley's all-pervasive, homeostatic society with its exploitation of the pleasure principle, the citizens of Skinner's utopia do appear to have a greater degree of self-determination. They can choose how to make their contribution to the communal economy, and, as Frazier tells Burris, '"a man's room is his castle."'(p.231) More importantly the greatest concession to a common social code they must make is in recognizing the familial ascendancy of their benevolent elders, to whose mature judgement they incline in everyday matters. Since there is no rigid social hierarchy, and people are not exploited to a greater or lesser degree according to their social standing, Walden Two is a community in which the <u>relative</u> importance of individuality is generally upheld as a prerequisite of personal dignity. Still, for all the idealistic connotations of his title, it is quite likely that Skinner's 'co-operative' (as opposed to communist) society would fail to impress Thoreau, an individualistic, reclusive non-conformist.

> "A modern, mechanized, managerial Machiavelli -- that is my final estimate of you, Mr.Frazier," he said, with the same challenging stare.
> "It must be gratifying to know that one has reached a 'final estimate,'" said Frazier.
> "An artist in power," continued Castle, "whose greatest art is to conceal art. The silent despot."
> "Since we are dealing in 'M's,' why not sum it all up and say 'Mephistophelean'?" said Frazier, curiously reviving my fears of the preceding afternoon.
> "I'm willing to do that!" said Castle. "And unless God is very sure of himself, I suspect He's by no means easy about this latest turn in the war of the angels. So far as I can see, you've blocked every path through which man was to struggle upward toward salvation. Intelligence, initiative - you have filled their places with a sort of degraded instinct, engineered compulsion. Walden Two is a marvel of efficient coordination - as efficient as an ant-hill!"
> <u>Walden Two</u>, p.237.

Naturally Frazier has anticipated and already countered Castle's latest thrust in his earlier discussion of how progress is seen in Walden Two: '"What we are trying to achieve through our cultural experiments...is a way of life which will be satisfying without propaganda and for which, therefore, we won't have to pay the price of personal stultification."' Just as he redefined Baconian science in Walden Two as '"the unnecessary and pleasurably selective exploration of nature"', Progress is cleansed of its Positivistic connotations to become '"an alert and active drive toward the future"'(p.194). Thus, Skinner's utopia is preserved from the charge that it is merely static or regressive society; but naive or not, his ideas have not been without admirers and converts.

Frazier strongly promotes the efficacy of his social principles: '"What is emerging at this critical stage in the evolution of society is a behavioural and cultural technology based on positive reinforcement alone."' p.244; and their millenial aim: '"Frazier's movement was essentially a religious movement freed of any dallying with the supernatural and inspired by a determination to build heaven on earth. What could stop him?"' (p.289) The case Skinner makes hinges on whether or not we accept two or three central assumptions.

Skinner seems to argue in Walden Two that sanity is a condition which is to a certain extent self-evident - he and Frazier both are fond of extolling '"common sense"' - and that people can be conditioned in the interests of social stability and the common good to accept certain restrictions upon their wishes ('"There are some things we can't offer you"' Frazier concedes to Burris, '"But they aren't important..."' p.232). So his primary proposition is that behaviourism is a potent and yet inoffensive means of controlling

the individual. Allied to this is the second, that a wholly rationalistic society is not only possible but desirable. Finally, he argues that ethics are relative, not immanent or immutable. Conformity, in the last analysis, is to be accepted by the individual member of Frazier's society as a moral imperative even though it is an expeditious way of ordering society. But who has set these wholesome, pragmatic social norms; who tells Castle what things "aren't important"? Another theme familiar from Huxley's novel, but far, far older still, also emerges towards the end of Skinner's novel.

Whatever else he may be, Frazier is not lacking in his own tortured brand of humility. Just as he spurned Castle's attempt to "pigeonhole" him as a monopolist - indeed, a fascist - he is quick to reject Burris's ingenuous acknowledgement of his genius. Whether or not we respond sympathetically to Castle's outbursts, it is later made plain that Frazier has been toying with him. Burris is privileged to learn the full extent of Frazier's conceit, which goes further than Castle has guessed. Skinner finally reveals the cause of the fundamental disturbance in Frazier's oddly unpredictable sensibility; he is at the same time the creator of this exciting community and an alienated being who has been surpassed by what he has brought into being: '"But God damn it, Burris! Can't you see? I'm-not-a-product-of-Walden-Two!"(p.233) Following precedents quite different from those utopian conventions to which he has repeatedly alluded, Skinner endows Frazier with a shadowy Faustian aspect which owes more to Frankenstein than Prometheus. Though he has achieved his dream of creating a society (a '"world of your own making"', as Burris recognises) Frazier is depicted not as another Mardok, but rather as a sort of scientific Wounded God, afflicted by his own success

because ironically it has deprived him of the recognition he craves. He lives on the very brink of madness, as Burris fearfully realizes when he and Frazier are alone in his solitary vantage point ('the Throne'). He is not without a certain grandeur, though sadly Skinner rather overdoes things in essaying a last tragic note which emerges more as mawkishness:

> "There's another point of similarity," he said at last when he saw I was not going to speak. "I don't know whether you'll understand this, Burris. I expect you'll laugh. But try to forget your professional cynicism."
>
> He dropped the telescope and hesitated for a moment. Then he flung his hand loosely in a sweeping gesture which embraced all of Walden Two.
>
> "These are my children, Burris," he said, almost in a whisper. "I love them."
>
> He got to his feet and started back along the ledge. I followed carefully. He turned into the underbrush and waited for me to catch up. He was embarrassed and rather confused.
>
> "What is love," he said, with a shrug, "except another name for the use of positive reinforcement?"
>
> "Or vice versa," I said.
>
> Walden Two, p.282.

In his later discussion of his novel, Skinner asserted that 'A state defined by repressive, formal, legal, social controls based on physical force is not necessary in the development of civilization, and although such a state certainly figured in our own development, we may be ready to move on to another stage.' In depicting what he thought that next stage should be, he eschewed both the optimistic Vernean, and pessimistic Wellsian, visions of the machine age. For Wells, machines offer mankind great promise provided mankind does not become seduced by their power and productivity, and thence decline prematurely (he expects the ultimate evolutionary regression of man but foresees a premature degeneration into a vitiated travesty of the intelligence which had invented the machines). Skinner considers that it is not only possible but crucial that mankind develop away from

repressive totalitarianism and what Bailey calls 'the standardization of the Machine Age'; but his view of man as an essentially virtuous or constructive creature rejects the depressing (Leavis rightly called them 'unintoxicating') possibilities inherent in modern consumerism which Huxley sends up so effectively.

Of the two futures which materialism seems to offer mankind, Skinner remains convinced that Walden Two would is a more acceptable alternative to the world of AF632. This might have seemed so on paper; but it also strikes one as the result of sustained wishful thinking. To most commentators Skinner's deterministic 'utopia' merely suggests another dimension of scientific threat, however well-intentioned Skinner's dispassionate meddling with human nature may appear. Of course, his depiction of an idealized rationalistic society (which exalts the temporal attributes and appetites of human nature and virtually ignores what religious writers would identify as the spiritual, and some materialists the "human" aspect of human nature), confirms for them the shallowness of scientific materialism. Yet this is ironic, since it is not so much the 'Machine Age' view of human life which they are attacking when they criticize Skinner - who as we have seen has little time for machine technologies - but the scientific notion (to which Skinner does seem to subscribe) of man as a 'soft machine' and a perfectible one at that. Indeed, it could be inferred from the absence of any but the most rudimentary machines in Skinner's horse-and-buggy utopia that his scientific materialism, while distinctly progressive, is not positivistic; Skinner argues that modern city life diminishes us. Bailey characterises this lack of faith in the ability of humanity to adapt psychologically to science as pessimism:

> Man may escape the standardization of the Machine Age if, as the utopian writers suggest, he controls machinery and uses it to supply his wants without bending to its pressure for a mechanical pattern of life. The pessimists reply that man is himself too limited for any sane adjustment. To the contention that human nature may be changed and the race improved, they reply that man is basically an animal who will always be ruled more by passion than by reason.
>
> 33.

Whether or not they would agree to be classed as pessimists in this way, most writers of religious science fiction would surely reject this pessimistic materialist view that man is merely an animal whose aspirations are betrayed continually by "passion". Instead, while asserting the spirituality of man, they would add the important qualification that human potential is limited by design. More than a heretical delusion, human deification is to them an ontological impossibility. Often they illustrate the ease with which man's religious impulse can become humanist rather than deist (i.e. centred on man himself, his achievements and destiny) in a thoroughly secular society devoid of religion and hence conscience. The devout tradition of science fiction possesses a sobering counterpart to Wells's "cosmic pessimism".

Modern Parables: the Religious SF of Lewis, Miller and Blish.

The sheer opprobrium Skinner's Walden Two has attracted suggests the strength of feeling aroused by the heightened impetus of scientific innovation after the Second World War. One recalls the axiom of Vonnegut's Ghost Shirts that if science and technology are allowed supremacy in order to preserve the nation, '"We cannot win good lives for ourselves in peacetime by the same methods."'(Player Piano, p.254); "good" here meaning 'richer' though not simply more affluent. Contemporary scientific confidence, its pragmatic values, and the

wartime ascendancy of a new, unmistakeably secular scientific establishment is viewed with considerable concern in texts by two of the three authors discussed below; Miller and Lewis seem more acutely anxious about science than Blish. Indeed, for Scholes and Rabkin, Lewis's is the most vociferous and effective rebuttal of the values of modern science in the field:

> Much of the impulse of behind science fiction in the twenties and thirties came from the need to express and articulate whatever values might be found in science itself, and this is true not only of a philosopher like Stapledon but of the more popular American or Gernsback-ian kind of science fiction as well. Perhaps it was inevitable that such a development would provoke the sleeping giant of religious fantasy. For the purposes of our history this anti-science-fiction movement may be considered primarily in the work of a single writer, its most vigorous champion, who met the challenge of both Stapledon and Gernsback head-on: Clive Staples Lewis.
> 34.

The novels of Lewis and Miller show that science fiction can be used to carry a narrative which for all its religious character assimilates the Wellsian scientific thinking the pioneering generic magazine editors like Hugo Gernsback and John W.Campbell demanded of writers. Although Blish professed agnosticism, his novel, like the others, uses a "perennial" religious philosophy as an exemplary source of the moral vision which mankind needs to restrain science - and the scientist. This excerpt from the first part of Miller's A Canticle for Leibowitz, with its substitution of Fallout for Death as the Fourth Horseman of the Apocalypse, suggests how great was the apprehension felt by those writers who viewed with pessimism, if not despair, the awesome power which they saw unleashed on one losing nation in the last days of the Second World War:

> "A spiritu fornicationis,
> Domine, libera nos.
> From the lightning and the tempest,
> O Lord, deliver us.

From the scourge of the earthquake,
O Lord, deliver us.
From plague, famine and war,
O Lord, deliver us.

"From the place of ground zero,
O Lord, deliver us.
From the rain of the cobalt,
O Lord, deliver us.
From the rain of the strontium,
O Lord, deliver us.
From the fall of the cesium,
O Lord, deliver us.

"From the curse of the Fallout,
O Lord, deliver us.
From the begetting of monsters,
O Lord, deliver us.
From the curse of the misborn,
O Lord, deliver us.
A morte perpetua,
Domine, libera nos.
A Canticle for Leibowitz, pp.14-15.

C.S.Lewis, the renowned critic and a prolific author both of moral discussion and religious fiction, casts materialism as the evil aspect of a modern version of the Manichaean Divide between good and evil in his famous science fiction trilogy. Out of the Silent Planet (1938) was the first of these novels; Voyage to Venus followed in 1943, with the third, That Hideous Strength, being published in 1945. Harold L.Berger concentrates on what he takes to be Lewis's central objectives:

> In his space trilogy... C.S.Lewis combines anti-scientism with religious moralism to argue seriously and vigorously that the supernatural Satanic powers of the universe are attempting to establish a reign of evil incarnate on earth and are using the scientific community as the principal instrument of their grand design. The above does not overstate Lewis's position; he has invested the trilogy with enough partisan force, artistic integrity, and intellectually exciting debate to raise it far above a "mad scientist" tale, and he has exposed in fantasy what he believes to be humanity's real moral and physical crisis.
>
> 35.

Lewis's style is both didactic and allusive; it becomes more

elaborate in the later work, culminating in an erudite masterpiece of synthetic eclecticism. He ranges freely and assuredly between an allegorical richness and an emblematic simplicity throughout the trilogy. Lewis advances Christianity as the most compelling sublunary creed, an assertion which is substantiated by the wisdom and power of the more-than-human cosmic beings (the 'eldila' or 'macrobes') Ransom encounters on other worlds(36). His Anglo-Catholic creed and its values being beyond reproach are never criticized. The only issue is the commitment of its human champions: the future of humanity depends on their strength or feebleness, their dedication or fallibility, their constant faith and their continual self-doubt.

In Out of the Silent Planet Lewis introduces both the exemplary, diffident figure of Ransom and the spiritual cosmology which is to figure in the later novels. Ransom is kidnapped by the brilliant scientist Weston and his backer, Devine. Both are intent on making a fortune by exploiting the natural resources of Malacandra, the planet of the sorns, 'spindly and flimsy things' with strangely humanoid faces 'thin and unnaturally long, with long, drooping noses and drooping mouths of half-spectral, half-idiotic solemnity.' As Ransom learns on Malacandra, his captors plan to give him to these creatures as a sort of placatory sacrifice. Things do not go just as Weston and Devine have planned, though, and Ransom escapes. After living for a time among the hrossa (who come to accept him as a hnau - a rational, humane creature like themselves), Ransom follows the instructions of one of the superior spirits of Malacandra, the eldila, to recommence his journey because Weston and Devine are pursuing him. He is befriended by a sorn, who takes him to appear before Oyarsa, the supreme being of this strangely beautiful world.

Ransom has to answer Oyarsa's questions about Earth, or Thulcandra, as the Malacandrians call the planet which has fallen under the sway of the Bent One: "'Tell me all. We know nothing since the day when the Bent One sank out of heaven into the air of your world, wounded in the very light of his light.'"(p.143) This interrogation is brought to an end by the arrival of Weston and Devine who have been captured and brought before Oyarsa. To the evident displeasure of Oyarsa, they have killed three of the hrossa who were sent to bring them.

When the creatures of Malacandra have performed their moving obsequies for their dead, Weston, Devine and Ransom each have to explain their actions. Devine only wants Malacandrian gold - 'sun's blood' - and he will be delighted to go. Weston's aspirations are more grandiose, and Ransom has to translate for him; here Lewis's depiction of scientific materialism as a destructive force is made explicit by the juxtaposition of Weston's positivistic assertions and Ransom's Malacandrian paraphrase:

> 'Life, of course,' snapped Weston, '...has ruthlessly broken down all obstacles and liquidated all failures and today in her highest form - civilized man - and in me as her representative, she presses forward to that interplanetary leap which will, perhaps, place her forever beyond the reach of death.'
>
> 'He says,' resumed Ransom, 'that these animals learned to do many difficult things, except those who could not; and those ones died and the other animals did not pity them.
>
> And he says the best animal now is the kind of man who makes the big huts and carries the heavy weights and does all the other things I told you about; and he is one of these and he says that if the others all knew what he was doing they would be pleased. He says that if he could kill you all and bring our people to live in Malacandra, then they might be able to go on living here after something had gone wrong with our world. And then if something went wrong with Malacandra they might go and kill all the hnau in another world. And then another - and so they would never die out.'
>
> Out of the Silent Planet, p.159.

Once again, science and materialism are in the dock, and the expected verdict is duly handed down: Weston's scientific positivism is insane. His plans to colonise Malacandra are pointless since the planet is dying, and Devine's greed has destroyed his hnau - his obsession with gold has made him spiritually dead. Before they are to be returned to Earth with a stern warning never to return to Malacandra, Oyarsa reveals to Ransom that the shallow materialism which afflicts people like Devine and Weston is a consequence of the deviance of the great cosmic spirit which oppresses rather than protects Earth, the 'Silent Planet' Thulcandra. Finally, Oyarsa makes a secret promise and prediction to Ransom, who has been guilty merely of fearfulness, rather than evil:

> '...you must watch this Weston and this Devine in Thulcandra if ever you arrive there. They may yet do much evil in, and beyond, your world... Be courageous, fight them. And when you have need, some of our people will help... The year we are in now...has long been prophesied as a year of stirrings and high changes and the siege of Thulcandra may be near its end. Great things are on foot. If Maledil does not forbid me, I will not hold aloof from them. And now, farewell.'
>
> Out of the Silent Planet, p.166.

In the sequel, Voyage to Venus, Ransom is summoned to Perelandra. In a beautifully evoked episode Ransom undergoes a complex test in an edenic setting: having befriended the charming Green Lady, he loses her innocent company when his old antagonist, Professor Weston, arrives on Venus. Weston, still pursuing his aspiration of interplanetary conquest in the name of Man, has acquired a new line in devious rhetoric. He tries to get Ransom to accept his new perception of the Holy Ghost as merely a personification of the active principle of his quasi-imperialistic kind of human evolution: '"I mean that nothing now divides you and me except a few outworn theological

technicalities with which organised religion has unhappily become incrusted. But I have penetrated that crust. The meaning beneath it is as true and living as ever."'(p.82).

Weston goes on, in his conceited way, to lecture Ransom about the contiguities between Ransom's creed and his new scientific spiritualism. What has so excited Weston seems to be the notion that the whole cosmos is moving towards an ultimate condition: '"The final disengagement of that freedom, that spirtuality, is the work to which I dedicate my own life and the life of humanity. The goal, Ransom, the goal: think of it! Pure spirit: the final vortex of self-thinking, self-originating activity."' William A.Quinn has analysed the theosophical issues of this dialectic:

> If Ransom accepts Weston's premise, as he is sorely tempted to do, he must also accept its implications regarding man's alleged immortality. The antagonist's un-theology is itself a thoroughly self-consistent, logical alternative to Ransom's own, and it must be recognized as such. 'That whole view of the universe which Weston (if it were Weston) had so lately preached to him, took all but complete possession of his mind...Reality lived - the meaningless, the un-made, the omnipotent idiocy to which all spirits are irrelevant and before which all efforts were in vain.' It seems curious that Ransom restates Weston's apparent deism in terms far more closely associated with existentialism. Lewis might even be suggesting that the most logical extrapolation of Weston's premise results in nihilism. And, as far as the question of individual salvation is concerned, the distinctions to be made between such deism, atheism, existentialism, nihilism, and solipsism do become purely academic. According to the rules of theological logic, Ransom must reject such a false First Principle - as such - and does so: 'Apparently it had all, even from the beginning, been a dark enchantment of the enemy's.'
>
> 37.

Since as a Christian he believes that God, the primum mobile, the Alpha, is also the Omega, Ransom is not persuaded by Weston's harangue and quietly decides to take a different tack. Is this force in any way personal? he asks Weston in his diffident way. The deluded

scientist confirms his guess with alacrity: '"Chosen. Guided. I've become conscious that I'm a man set apart. Why did I do physics? Why did I discover the Weston rays? Why did I go to Malacandra? It - the Force - has pushed me on all the time. I'm being guided. I know now that I am the greatest scientist the world has yet produced."'(p.83) Weston, mad by Malacandrian standards, is now evidently wholly under the sway of the diseased spirit of Thulcandra. He rants on, until in the course of his own peculiarly self-centred logic (wherein Luciferian pride meets ophidian rationalism) he makes a fatal, if defiant, gesture:

> "Idiot," said Weston. His voice was almost a howl and he had risen to his feet. "Idiot," he repeated. "Can you understand nothing? Will you always try to press everything back into the miserable framework of your old jargon about self and self-sacrifice? That is the old accursed dualism in another form. There is no possible distinction in concrete thought between me and the universe. In so far as I am the conductor of the central forward pressure of the universe, I am it. Do you see, you timid, scruple-mongering fool? I am the Universe. I, Weston, am your God and your Devil. I call that force into me completely..."
>
> Voyage to Venus, p.86.

At this point Weston becomes literally possessed by the Bent One and is reduced from being the willing instrument of the dark Force to just its zombie; his Faustian hubris has finally brought him annihilation, not emancipation and power. The stage is again set for Ransom, representing the forces of Good, to contend against the Force of Evil.

The contest is scriptural; Weston is determined to tempt the Lady of Perelandra - another Eve - to defy the wisdom of Maledil, the Supreme Cosmical Spirit. One admirer of Lewis's fiction writes glowingly of his treatment of this Edenic storyline:

> ...Lewis daringly tells the story of a new temptation. The continuance of this beautiful world where innocence and experience need not be incompatible and where thought, action, and emotion are one, depends on the

> decision of its two inhabitants. It can vanish, as did Eden, with the wrong choice of a reasonable being, bound only by a single commandment of love. The drama is focussed on the Queen Mother and her ability to observe the simple injunction laid upon her, as Weston...now irrevocably lost to grace, plays the role of tempter, and with every specious argument from the appeal to intellectual pride to a plea - so familiar to modern ears - for a relative Morality, tries to destroy the goodness from which it has now become his very nature to recoil. Ransom, on the other hand, aware of the tragic consequences of second Fall, plays the good angel in these discussions with the Perelandran Eve.
>
> 38.

Despite Ransom's best efforts, Weston persuades her to be assertive, envious and vain; but fortunately she quickly rejects his temptations. The conflict now moves to another plane: Ransom, so named for his mission as an aspect of Maledil who, in another time, has made an ultimate sacrifice as Jesus, has to contest the issue physically with 'Un-man', as he now thinks of Weston. After an epic struggle for ascendancy in which his determination and resilience are proved, he succeeds in killing Weston and thus preserves this prelapsarian world from the taint of an Original Sin. In his last pages, the novelist turns seer; and if this impulse is quintessentially the science fiction author's, the aspiration which is conveyed is manifestly devout:

> The final chapter of Perelandra (i.e., Voyage to Venus) ...is explicitly teleological. The discussion of the 'ends' that await both Perelandra and Thulcandra and - by analogy - each of their respective occupants is eventually clarified...through the comments of the eldila.
>
> 39.

As the eldila Malacandra and Perelandra, the archons of Mars and Venus, confirm: '"The world is born today. Today for the first time two creatures of the low worlds, two images of Maledil that breathe and breed like the beasts, step up that step at which your parents fell, and sit in the throne of what they were meant to be. It was never seen before."'(pp.182-183) Recognised as Friend and Saviour by

the Adam and Eve of this new world, Tor and Tinidril, Ransom has achieved a new understanding of the real spirit of the Cosmos, and before he is returned to Thulcandra more sensitive, astute, resourceful, and wise about the purpose and meaning of life, he learns that his native world must be redeemed or it will be swept away as a flawed creation.

That Hideous Strength relates how Ransom and a small band of acolytes thwart the shadowy, corrupt, and fascist scientists of the N.I.C.E., 'the first-fruit of that constructive fusion between the state and the laboratory on which so many thoughtful people base their hopes of a better world.'(p.13) By calling up among other things the chivalric, heroic spirit of old Christian England personified by the resurrected Merlin, Ransom and his company are able to defeat those who labour under the dark influence of the Bent One. Characteristically, Lewis manages to make the contest at the heart of this, the final novel of the series, no less gripping or poetic than its predecessors. Still more Gothic in tone than the contest between the Un-man and Ransom, Lewis manages to make this seem Ransom's most desperate confrontation yet. That Hideous Strength also includes another inventive and pointed attack by Lewis on scientific materialism. Though in his Preface to the abridged, better known edition of 1955 he acknowledges the fantastic aspects of his "'tall story' about devilry", he is also quick to claim that "it has behind it a serious 'point'". In describing he central unifying theme of the trilogy, Scholes and Rabkin identify that serious point Lewis claims for this and, we may suppose, other stories:

> The challenge that Lewis mounted was not simply a challenge to Gernsback & Co. It was a challenge to science itself, and the modern technological culture based upon science, to produce an ethic worth living and dying for.

> It was also, clearly, a challenge Lewis felt could not be met. For him, ethical theory was capable of no development and needed none. What Christianity provided was sufficient.
>
> 40.

In this marvellous conservative tale (which quite outshines Noyes's The Last Man), Lewis again reviles the hubris of a scientific positivism whose ultimate aim is the advent of the New Man, the era of "Man Immortal and Man Ubiquitous", as the crazy Italian physiologist Filostrato reveals to Mark Studdock halfway through the novel. The polemic is again directed against this vision of all-conquering scientific Man, always contending for even greater mastery of the universe and its subjugation to heroic human will.

This time the setting, Bracton College, is nearer home than Mars or Venus, and the threat Lewis pits Ransom against has a topicality which adds force to his theme. Wartime centralisation has allowed the development of powerful secular organisations such as the National Institute of Co-ordinated Experiments. This scientific body (enthusiastically supported by the College's 'Progressive Element') is growing in power, influence and size at the expense of older institutions such as the College, from whom it acquires land, including Merlin's Well, for its new laboratories. It also enlists a new cadre of radical intellectuals such as Mark Studdock, an ambitious College sociologist who is recruited by Lord Feverstone ostensibly as a propagandist. The ends and means of the N.I.C.E. programme (as explained to Mark by Feverstone, prime mover behind the College's acceptance of the N.I.C.E. offer for Bragdon Wood) have aspects not just of the Brave New World or Walden Two but indeed the Third Reich:

"As I said, the interplanetary problem must be left on one side for the moment. The second problem is our rivals on this planet. I don't mean only insects and bacteria. There's too much life of every kind about, animal and vegetable. We haven't really cleared the place yet. All that is to be gone into."

"Go on. This interests me very much."

"Man has got to take charge of man. That means, remember, that some men have to take charge of the rest."

"What sort of thing have you in mind?"

"Quite simple and obvious things, at first - sterilisation of the unfit, liquidation of backward races, selective breeding. Then real education, including pre-natal education. By real education I mean one that makes the patient what it wants infallibly: whatever he or his parents try to do about it. Of course, it'll have to be mainly psychological at first. But we'll get on to biochemical conditioning in the end and direct manipulation of the brain. A new type of man..."

That Hideous Strength, pps.26-27.

If we consider Brave New World as science fiction, as opposed to science fantasy, we may surely view That Hideous Strength in the same way, not least because it deals with the very same subject - the effects of scientific advances on people - and because its author takes few if any liberties with his theological premises. An important observation must be made here, however. It would be quite wrong to allow Lewis to persuade us that the precepts of the N.I.C.E. offend us because they are heretical - which they are - since they outrage the ethics of humanism not one whit less. These hopes are profane because they are totalitarian, not because they are irreligious or hubristic.

The "interplanetary problem" which Feverstone mentions is a retrospective allusion to Weston's failure to defeat the eldila and their representative, Ransom, in Voyage to Venus. Weston may no longer have any value to Lewis as a materialistic villain, but he has a whole crowd of malign successors led by Prof. Frost and the D.D. (ironically, "Depute Director" rather than Doctor of Divinity). "Fairy" Hardcastle (a sadistic bisexual 'policewoman'), Filostrato,

Straik (a psychotic clergyman who repudiates the "damnable doctrine" that only Heaven can be perfect) and the cynical, duplicitous Devine (now Lord Feverstone) - whatever their peculiarities, all who are involved with the N.I.C.E. have one attribute in common, power-lust. Frost and Wither can afford to allow them temporal power, because these Faustian twins aspire to a superior, infinite power.

Outwardly, the N.I.C.E. is an organisation created for the systematic investigation of how to gain the maximum possible national advantage from positivistic innovation. No less than the Ilium Works of Player Piano, it is an ironic tribute to national greed. However, the Inner Circle controlled by Frost and Wither are given to believe that it has a clandestine purpose. Science is to be the means of establishing a nasty new brand of totalitarianism - in the name of racial preservation: '"humanity's at the cross-roads...it is the main question at the moment: which side one's on - obscurantism or order. If Science is given a free hand it can now take over the human race and recondition it: make man a really efficient animal. If it doesn't - well, we're done."'(p.25). The young sociologist is adroitly manipulated by Feverstone, Hardcastle and the D.D., Wither, into surrendering his Bracton Fellowship in exchange for a very precarious existence in the Inner Circle of the N.I.C.E. as their principal propagandist. Lewis, ever eager to illustrate the Christian doctrines about sin and personal responsibility, identifies the moment when Mark goes over to the enemy:

> This was the first thing Mark had been asked to do which he himself, before he did it, clearly knew to be criminal. But the moment of his consent almost escaped his notice; certainly, there was no struggle, no sense of turning a corner.
>
> That Hideous Strength, p.79.

Ironically, Mark has not been recruited for his own sake, as he

vainly believes, for the N.I.C.E. actually want his clairvoyant wife. However, to keep him in their camp, Mark is shown Belbury's most secret project - the Head. Alcasan has been guillotined for murder, but his head is being used for a gruesome experiment in artificial intelligence and life-support. Here Lewis draws on a source of Gothic horror which goes back through The Island of Doctor Moreau at least to Frankenstein. Vivisection and scientific interference in the usual processes of life and decay have prevented the murderer's head from corrupting, and then have brought his brain to an unnatural level of development, as Jane Studdock - herself a clairvoyant - recounts:

> "I thought I saw a face floating in front of me. A face, not a head, if you understand. That is, there was a beard and nose and coloured glasses, but there didn't seem to be anything above the eyes. Not at first. But as I got used to light, I thought the face was a mask tied to a kind of balloon. But it wasn't, exactly...I'm telling this badly. What it really was, was a head (the rest of a head) which had had the top part of the skull taken off and then...then...as if something inside had boiled over. A great big mass which bulged out from inside what was left of the skull. Wrapped in some sort of composition stuff, but very thin stuff. You could see it twitch. I could remember thinking, 'Oh kill it. Put it out of its pain.' But only for a second, because I thought the thing was dead, really. It was green looking and the mouth was wide open and quite dry. And soon I saw that it wasn't floating. It was fixed up on some kind of bracket, and there were things hanging from it. From the neck, I mean. Yes, it had a neck, but nothing below: no shoulders or body. Only these hanging things. Little rubber tubes and bulbs and metal things."
> That Hideous Strength, p.107.

Jane Studdock has been having nightmares which have greatly distressed her. Fearing she is going mad, Jane visits a psychotherapist who invites her to join Ransom's household in St. Anne's -on-the-Hill because this evidence of her unique gift will in time also betray her to the Inner Circle of the N.I.C.E. The scientists and fascists must prevent her joining Ransom's company, who are also preparing for the coming titanic struggle between the Oyeresu like

Maledil and the Bent One. Modern-minded Jane initially rejects the invitation; the gentle community, led by the Director, Ransom - who is coincidentally the last Pendragon, and the contemporary Master of Merlinus Ambrosius - strikes her as an oddly old-fashioned, other-worldly lot. Still, having fallen briefly into the clutches of the Fairy who, oblivious to her real importance, delightedly tortures her, Jane joins the Company who will contend against Frost, Wither and the N.I.C.E. to save mankind from itself. Ransom's explanation conflicts with that later advanced to account for the N.I.C.E.'s adaptation of Alcasan's head: '"...if this technique is really successful, the Belbury people have for all practical purposes discovered a way of making themselves immortal. It is the beginning of what is really a new species - the Chosen Heads who will never die. They will call it the next step in evolution. And henceforward all the creatures that you and I call human are mere candidates for admission to the new species or else its slaves - perhaps its food."'(p.117) The association of evolution and anthropophagy may be coincidental, but recalls The Time Machine.

Even Ransom does not know the real nature of the threat to the world; "humanity" (ultimately meaning not just the race but even the essential qualities of thought and conduct we can exhibit in our best, most gracious moments) is to be replaced by 'Technocracy'; and modern scientific warfare - which spares the scientist alone - is to be the means of attaining a profane totalitarianism after the spiritually weak are not just reduced to servility but destroyed. Frost tells Mark that '"The masses are therefore to disappear. The body is to become all head. The human race is to become all Technocracy."' (p.157). The Inner Circle are simply useful dupes.

Jane and Studdock in their different ways each represent "ordinary" humans whose weaknesses are symptomatic of what Lewis calls contemporary evils. Lewis is less harsh in reproaching Jane, but his contempt for her independence, and Ransom's insistence on her (sexual) submission to the (mystical) religion of Christ to 'cure' her of alleged marital - and hence, personal - inadequacy (p.194), is to say the least unfortunate; it would doubtless infuriate many readers who do not share Lewis's appreciation of St.Paul's ideas about the inequality of the sexes. On the other hand, Lewis simply reviles 'Modern' man, represented by Mark:

> It must be remembered that in Mark's mind hardly one rag of noble thought, either Christian or Pagan, had a secure lodging. His education had been neither scientific nor classical - merely "Modern". The severities both of abstraction and of high human tradition had passed him by: and he had neither peasant shrewdness nor aristocratic honour to help him. He was a man of straw, a glib examinee in subjects that require no exact knowledge...
> That Hideous Strength, p.109.

Much praise has been lavished on Lewis's novel, but it is important - and not just to be able to place him in a correct generic tradition - to recognise that the work is imbued with values which are not always as humane or liberal as Lewis insists. The forcefulness of Lewis's rhetoric and his own moral certitude may be compelling, perhaps even in some respects admirable; but they are also - inarguably - tendentious. Mark Studdock is "Modern" not simply because Lewis wants to portray the susceptibility to evil of contemporary young people who have rejected Christian values and have no time for traditional virtues or scholarship, but because Lewis wants to allow scope in his fiction for his ideas about the insidious changes in human nature which would result in 'the Abolition of Man'(41). Mark, a modern man, is also to a fair degree already an 'abolished' man.

Later, it becomes clear that both Jane and Mark are of greater significance than most of their N.I.C.E. tormentors realise. The Head is deceptive; far less even than the mundane version of life eternal (as Filostrato and the Inner Circle are led to believe) it is merely a sort of cosmic telephone through which Frost and Wither communicate with their dark overlord, as Frost explains to Mark: '"The vocal organs and brain taken from Alcasan...have become the conductors of a regular intercourse between the macrobes and our species."'(p.156) This of course is a grotesque travesty of the role which Jane performs for Ransom's company; the dripping, gruesome oracle is materialism's answer to her providential gift. Jane's clairvoyance helps Ransom deprive the N.I.C.E. opposition of the great power of Merlin, who lay suspended in a 'parachronic trance' in his tomb at the heart of Bragdon Wood.

Merlin is acquainted with the facts by Ransom, and he departs to do battle with the progressive scientific establishment in defence of the time-honoured religious values and liberties he symbolizes. Coincidentally, Lewis achieves a mystical lineage for his chosen creed which, by association, he takes back beyond the Tudor Reformation which actually established it. Both Mark and Jane are vital to its continuation, Merlin reveals, because they are the last carriers of the genes of the noble house of Logres.

In the closing chapters of the novel Lewis allows his gift for derisive irony free rein as he lampoons the would-be conquerors of humanity. Merlin, invested with preternatural powers by the angelic macrobes who long ago on Mars took Ransom into their confidence, is admitted to Belbury as an interpreter for the tramp whom Frost and Wither believe to be the resurrected mage of the Dark Ages. Mark,

meantime, has declined to join Frost and Wither as the third N.I.C.E. potentate; he has been unable to desecrate a crucifix as part of his initiation into their infernal magistracy. In a cruelly comic, bitter setpiece enlivened by the veritably scriptural confusion of tongues Merlin conjures up, the Inner Circle and their guests are massacred after a sumptuous dinner by the tortured beasts which Merlin has released from the vivisectionists' animal houses adjoining the Banquet Hall at Belbury. Retribution (in the form of justice of a bloodily poetic kind) also falls on the three chief scientists Filostrato, Frost and Wither before the earth simply swallows up the whole of Edgestow - Belbury, Bracton College and Bragdon Wood.

As one might expect from a writer with such pronounced religious convictions, the keynotes of Lewis's final chapter are providence and redemption. Even Curry, the last survivor of the College which has been subverted so easily by the N.I.C.E., is not immune. He believes he has found a new vocation:

> Curry always in later life regarded this as one of the turning-points of his life. He had not up till then been a religious man. But the word that now instantly came into his mind was "Providential". He'd been within an ace of taking the earlier train: and if he had... The whole College wiped out! It would have to be rebuilt. There'd be a complete new set of Fellows, a new Warden. It was Providential again that some responsible person should have been spared. The more he thought of it, the more fully Curry realised that the whole shaping of the future college with the sole survivor. It was almost like being a second founder. Providential--providential.
>
> That Hideous Strength, p.245.

However, the signs are all there. With admirable, practised facility Lewis ironically and subtly exposes Curry's post-lapsarian mentality - the vanity, the ambition, the desire to recreate and transform into one's own image, and thereby propagate that image: these are the scars of Man's Fall from Grace which disfigure humanity. Only at St.

Anne's-on-the-Hill is there truly hope for a new beginning, but even that, as Ransom has already revealed to his little band of the elect, will have to endure in the face of a threat of extinction which will persist as long as humanity wears its materialist aspect. Lewis adopts a sociopolitical metaphor for this penultimate revelation, which is taken up by the exemplary Christian scholar Dimble, who gives a broader exposition of Ransom's description of England as the outcome of the contending energies of Logres, and Britain:

> "..if one is thinking simply of goodness in the abstract, one soon reaches the fatal idea of something standardised - some common kind of life to which all nations ought to progress. Of course there are universal rules to which all goodness must conform. But that's only the grammar of virtue. ...The whole work of healing Tellus depends on nursing that little spark, on incarnating that ghost, which is still alive in every real people, and different in each. When Logres really dominates Britain, when the goddess Reason, the divine clearness, is really enthroned in France, when the order of Heaven is really followed in China - why, then it will be spring. But, meantime, our concern is with Logres. We've got Britain down, but who knows how long we can hold her down? Edgestow will not recover from what is happening to her tonight. But there will be other Edgestows.
>
> That Hideous Strength, pp.242-243.

While this seems less than propitious, Ransom finally conveys to them the significance of their victory before he returns to his beloved Venus: '"Perelandra is all about us, and Man is no longer isolated. We are now as we ought to be - between the angels who are our elder brothers and the beasts who are our jesters, servants, and play-fellows."'(p.248) On this note - the gravity of which is somewhat diluted by the comic intrusions of love-smitten animals who are enjoying noisy assignations all around Ransom's headquarters - Lewis concludes his elaborate parable with a dash of lyrical eroticism. Mark and Jane, rehabilitated and purified by their participation in the struggle against evil, are reconciled as Christian lovers; and a

prospect is opened up to Mankind of a devout fulfillment from which the transgression of Adam and Eve had barred all their descendants.

Lewis's promised millenium might well seem 'unintoxicating' (to use Leavis's word) to all sorts of readers, but perhaps especially to materialists, atheists and other scientific sceptics. In the prefaces of Out of the Silent Planet and Voyage to Venus, Lewis explicitly repudiates any suggestion that any character is to be identified as H.G.Wells, perhaps the sumpreme contemporary champion of agnostic and atheistic rationalism, even going so far as to make his enjoyment of Wells's stories a matter of record: 'The author would be sorry if any reader supposed he was too stupid to have enjoyed Mr. H.G. Wells's fantasies or too ungrateful to acknowledge his debt to them.' (Out of the Silent Planet) Yet the treatment of rationalism in That Hideous Strength and the other two books shows Lewis as a committed opponent of scientific materialism. When Ransom hopes to see '"the goddess Reason, the divine clearness...really enthroned in France"' he means 'reasonableness' rather than rationalism.

Walter M.Miller's A Canticle for Leibowitz(1959) shares a major theme of Lewis's trilogy, that of an individual's moral responsibility not only for his own actions, but for the wider activities of any organisation to which he belongs:

> Thon Thaddeo knew the military ambitions of his monarch. He had a choice: to approve of them, to disapprove of them, or to regard them as impersonal phenomena beyond his control like a flood, famine, or whirlwind.
>
> Evidently he accepted them as inevitable - to avoid having to make a moral judgement. Let there be blood, iron and weeping...
>
> How could a man thus evade his own conscience and disavow his responsibility - and so easily! the abbot stormed to himself.
>
> But then the words came back to him. For in those days, the Lord God had suffered the wise men to know the means by which the world itself might be destroyed...

> He also suffered them to know how it might be saved,
> and, as always, let them choose for themselves.
> A Canticle, p.176.

Miller's novel possesses the same devout principle which informs Lewis's trilogy, the need for individual commitment and sacrifice to preserve mankind from self-destruction in a welter of materialist delusions about our unique importance and right to dominion over the world and beyond. Yet in most other respects they are rather different. A blend of anecdote, reportage and chronicle, Miller's style may be less conspicuously erudite and colourful than Lewis's, but his seems to advance the more compassionate view of human nature. In any case his novel does also attest Miller's familiarity with both scientific and ecclesiastical history, both of which are used to excellent effect in his story of a new Dark Age, Renaissance and Fall. While in their different ways the books are absorbing and thought-provoking, Miller's novel has always struck this reader as the more disturbing and profound.

The focal point of Miller's novel is the monastery of St.Leibowitz, somewhere in the American desert. It is the setting for the theological and cultural dilemma of each of the novel's three parts, Fiat Homo, Fiat Lux and Fiat Voluntas Tua. The novel as a whole forms an account of a renewed cycle of social evolution following a nuclear catastrophe, and in it Miller takes the philosophia perennia thousands of years into the future and ultimately into space.

The Roman Catholic Church is depicted as the final bastion of a traditional religious humanism, and the Order of Blessed Leibowitz is its archive of ancient secular knowledge. The Brothers collect and lovingly preserve scraps of information left after the destruction of our high-tech world, though usually they are unaware of the signifi-

-cance of their finds. The Memorabilia contains the relatively few remaining writings which have escaped the holocaust of the twentieth century and the Simplification - an orgy of vengeance when the outraged survivors destroy scientists and their texts. It would be quite wrong to assume with Thon Thaddeo in Fiat Lux that the Memorabilia is preserved simply because knowledge is man's birthright and, whatever the myths about a primordial Fall from Grace may suggest to the contrary, is the means whereby men can exert dominion over their world. Rather, the information the monks have garnered for the rebirth of learning is morally neutral, as Frank D.Kievitt (for whom the novel is 'a third testament that interprets religious truth in a way that makes it more real and immediate' for contemporary mankind) has also observed:

> The most precious treasure that the monks guard is the Memorabilia, a series of documents preserving the secrets of nuclear power. The double purpose of the monks reflects Miller's themes; man needs religion, but he also needs science and technology. Miller does not see religion and science as in any way antithetical. If man allows himself to be directed by his spiritual side and uses technology in accord with divine revelation, it is a good that must be both preserved and defended. ...Man is far beyond any nineteenth century dichotomization of science and religion into conflicting and competing systems; they are both integral to man's nature and inheritance and, as such, must be equally cultivated and cherished.
>
> 42.

Kievitt's reading is too sanguine, however. It is, of course, the use to which the knowledge is put, and the attitudes which govern its application, which involve moral or ethical values, no less for Thon Thaddeo than for Faustus or Victor Frankenstein. Moreover A Canticle for Leibowitz concludes with the world once again destroyed through Man's moral failure. As Russell M.Griffin argues, the heart of the matter is whether the scientist is actually capable of acting responsibly enough to be able to eschew the temptation to exploit

knowledge recklessly and ruthlessly:

> The central quest of the novel, then, becomes the search for a leader of sufficient spiritual strength and wisdom to transcend technology's control of man and to direct technology toward some kind of moral good, a man who can subordinate scientia to sapientia.
>
> 43.

Unfortunately, since our present interest has more to do with the second and final sections, one can make only the briefest allusion to the first section of this fine novel, and its two main characters, the irascible Dom Arkos, Abbot, and Brother Francis, the self-effacing, honest novice who is denied full admission to the order for years because he discovers the Fallout Shelter controversially held by some of his fellows to be the last resting place of Emily Leibowitz, wife of the order's founder. The ecclesiastical wrangle which dominates this section hinges on whether Emily was dead before the Blessed Leibowitz became a holy book-legger and suffered martyrdom. The Order wish to have their patron canonised, but the Abbot is mistrustful of Francis's insistence that he was shown the Shelter by a mysterious, wizened traveller who left him a cryptic message in Hebrew. After the documents found by Francis have been inspected separately by the official promoter of the Order's case and by the Advocatus Diaboli, the Pope announces Leibowitz's canonization. Miller has taken Francis to New Rome to attend the ceremony and receive the Papal Blessing, but on his journey home the patient monk is killed and eaten by mutant bandits.

Unless one is prepared to assume that he has gone to a heavenly reward, Francis's fate seems a poor return on his years of dedicated labour and integrity: perhaps he is thus spared the temptation to personal vanity which, as the instrument of the canonization, he would meet if he did return to the monastery with his great news.

Yet to read his life thus would not be in the spirit of the novel:

> ...in a dark sea of centuries wherein nothing seemed to flow, a lifetime was only a brief eddy, even for the man who lived it. There was a tedium of repeated days and repeated seasons; then there were aches and pains, finally Extreme Unction, and a moment of blackness at the end - or at the beginning, rather. For then the small shivering soul who had endured the tedium, endured it badly or well, would find itself in a place of light, find itself absorbed in the burning gaze of infinitely compassionate eyes as it stood before the Just One. And then the King would say: "Come," or the King would say: "Go," and only for that moment had the tedium of years existed. It would be hard to believe differently during such an age as Francis knew.
>
> Brother Sarl finished the fifth page of his mathematical restoration, collapsed over his desk, and died a few hours later. Never mind. His notes were intact. Someone, after a century or two, would come along and find them interesting, would perhaps complete the work. Meanwhile, prayers ascended for the soul of Sarl.
>
> A Canticle, p.68.

Centuries pass and the world is becoming a technological place again as scholars and scientists re-invent the learning lost with the fiery passing of the old world. Brother Francis is now revered as the Venerable Francis of Utah and the village of Sanly Bowits, which has grown up near the monastery, can boast an uniquely high literacy rate of 8% thanks to the efforts of the monks. Yet Fiat Lux begins in the court of Hannegan, perhaps the most powerful of the princelings whose states have grown up amid the debris of the past. It is the year 3174, and since Hannegan is bent upon the conquest and political reunification of the continent, New Rome is represented at his court by Marcus Apollo. The prelate's mission is to keep his superiors informed so that they can prevent the Church becoming involved in the wars which they expect will accompany Hannegan's empire-building. Apollo has an immediate problem, however, in the shape of the brilliant, anti-clerical scientist Thon Thaddeo, the bastard son of Hannegan's father. Thaddeo represents the new breed of scientist, and his scepticism is

a familiar challenge to Christian ethics:

> Thon Thaddeo was peering at something in the street below. He beckoned to the priest. "Come here a minute. I'll show you why."
>
> Apollo slipped from behind the desk and looked down at the muddy rutted street beyond the wall that encircled the palace and barracks and buildings of the collegium, cutting off the mayoral sanctuary from the seething plebeian city. The scholar was pointing at the shadowy figure of a peasant leading a donkey homeward at twilight. The man's feet were wrapped in sackcloth, and the mud had caked about them so that he seemed scarcely able to lift them. But he trudged ahead in one slogging step after another, resting half a second between footfalls. He seemed too weary to scrape off the mud.
>
> "He doesn't ride the donkey," Thon Thaddeo stated, "because this morning the donkey was loaded down with corn. It doesn't occur to him that the packs are empty now. What is good enough for the morning is also good enough for the afternoon."
>
> "You know him?"
>
> "He passes under my window too. Every morning and evening. Hadn't you noticed him?"
>
> "A thousand like him."
>
> "Look. Can you bring yourself to believe that that brute is the lineal descendant of men who supposedly invented machines that flew, who travelled to the moon, harnessed the forces of Nature, built machines that could talk and seemed to think? Can you believe there were such men?"
>
> Apollo was silent.
>
> "Look at him!" the scholar persisted. "No, but it's too dark now. You can't see the syphilis outbreak on his neck, the way the bridge of his nose is being eaten away. Paresis. But he was undoubtedly a moron to begin with. Illiterate, superstitious, murderous. ...Look at him, and tell me if you see the progeny of a once-mighty civilization? What <u>do</u> you see?"
>
> "The image of Christ," grated the monsignor, surprised at his own sudden anger. "What did you expect me to see?"
>
> The scholar huffed impatiently. "The incongruity. Men as you can observe them through any window, and men as historians would have us believe men once were. I can't accept it. How can a great and wise civilization have destroyed itself so completely?"
>
> "Perhaps," said Apollo, "by being materially great and materially wise, and nothing else." He went to light a tallow lamp, for the twilight was rapidly fading into night. He struck steel and flint until the spark caught and he blew gently at it in the tinder.
>
> "Perhaps," said Thon Thaddeo, "but I doubt it."
>
> <u>A Canticle</u>, pp.105-106.

The secular philosopher has heard something of the work of the Order and is keen to assess their scientific archive for himself, but he is not willing to cross the continent to inspect their treasures at the abbey. However, since the monks will not accede to his request he reluctantly makes his way there two years later. Mistrusting their motives, the Order is wary of allowing the scientists of the new era access to their Memorabilia, as the Abbot Dom Paulo confides to Benjamin, the Wandering Jew who showed Francis of Utah where the Fallout Shelter was hidden, and who later buried him after the buzzards had finished with him. Benjamin is an interesting and unusual character. A sort of anti-Mephistopheles, he figures in all three sections as a cynical kind of oracle. He claims to have lived from the time of Christ, and the sole purpose of his existence seems to be to witness the Second Coming. All this makes the archaic wisdom of his counsel rather hard to credit, even on those rare occasions when clerics like Paulo are prepared to listen, however sceptically, to his uncompromising pronouncements: '"I have no sympathy for you. The books you stowed away may be hoary with age, but they were written by children of the world, and they'll be taken from you by children of the world, and you had no business meddling with them in the first place."'(p.144)

Still, ever hopeful that the mistakes of the past will not be made again, and aware that the probable consequences of further refusal would entail the loss of the Memorabilia, Dom Paulo receives Thaddeo cordially. Neither the abbot or his guest know that the greatest scientist of his day is in for a couple of unpleasant surprises thanks to the activities of one Brother Kornhoer.

Unlike his brethren, Kornhoer is no mere copyist; in fact he is

as much a new breed as Thaddeo, whom he admires. Kornhoer is an experimenter whose catchword "Progress!" is a defiant answer to the Keeper of the Memorabilia's cry of "Perdition!" The locus of their confrontation is the vaulted basement Library where much against Brother Armbruster's wishes Kornhoer has been allowed to construct a dynamo to power the first electric arc-light made in centuries. Thus, there are signs within the Order, too, of the restoration of lost knowledge and skills, and there is talk of a Renaissance; into this comes Thon Thaddeo, whose first discovery is that Kornhoer has outstripped him in the practical application of his own theorems:

> "CONTACT!" said Brother Kornhoer, as Dom Paulo, Thon Thaddeo and his clerk descended the stairs.
>
> The monk on the ladder struck the arc. A sharp spffft!--and blinding light flooded the vaults with a brilliance that had not been seen in twelve centuries.
>
> The group stopped on the stairs. Thon Thaddeo gasped an oath in his native tongue. He retreated a step. The abbot, who had neither witnessed the testing of the device nor credited extravagant claims, blanched and stopped speech in mid-sentence. The clerk froze momentarily in panic and suddenly fled, screaming "Fire!"
>
> The abbot made the sign of the cross. "I had not known!" he whispered.
>
> The scholar, having survived the first shock of the flare, probed the basement with his gaze, noticing the drive-mill, the monks who strained at its beams. His eyes traveled along the wrapped wires, noticed the monk on the ladder, measured the meaning of the wagon-wheel dynamo and the monk who stood waiting, with downcast eyes, at the foot of the stairs.
>
> "Incredible!" he breathed.
>
> The monk at the foot of the stairs bowed in acknowledgement and depreciation. The blue-white glare cast knife-edge shadows in the room, and the candle flames became blurred wisps in the tide of light.
>
> "Bright as a thousand torches," breathed the scholar. "It must be an ancient - but no! Unthinkable!"
>
> A Canticle, p.156.

Delightfully inventive though this episode is, Miller is not content to merely serve up to the reader re-runs of great moments in the history of science, or metaphoric dramatizations of experiments from the pages of some primer in electrostatics. Rather his design is to

suggest that ironically the obscure monk is in many respects the equal of his famous, privileged co-devotee of natural philosophy and the lore of the ancients, as he implies in describing Thaddeo's shocked reaction - 'But there was no balm to soothe an affront to professional pride - then or in any other age.'(p.157) There is another, more sombre irony in the allusion to the birth of light which is the threshold to another scientific era doomed to fiery self-extinction.

Kornhoer will find himself caught, however briefly, between his faith and his interest in natural philosophy, for Thaddeo covets his workmanship almost as much as the secrets of the Memorabilia. His dilemma is symbolic of that facing the Order at large, for with this late rebirth of science and scholarship the order's role is becoming less crucial, and the monks' stark choice is between themselves becoming progressive investigators and innovators or keeping to their traditional purpose, which will become less and less important and meaningful. But as Kornhoer's decision attests, their dedication is neither self-seeking nor profane; as he prefers the demands of his faith over the rewards of pursuing his own interests, so does the Order's ancient religious discipline require it to remain independent of secular princes and their whim.

While the scientist resides in the monastery its community can serve him as it was ordained to, and the impending challenge the Order faces remains vague; but as Paulo perceives, it is both inevitable and profound. The long and patiently awaited moment when the outside world will use the knowledge held in the Memorabilia has arrived; and while the question which perplexes Paulo is the world's ethical readiness for it, he has no choice but to release it to Thon

Thaddeo. However, when war at last breaks out as Hannegan pursues his strategies to achieve hegemony, the central issue (never far from the surface) re-emerges, as this exchange shows:

> "Keep science cloistered, don't try to apply it, don't try to do anything about it until men are holy. Well, it won't work. You've been doing it here in this abbey for generations."
> "We haven't withheld anything."
> "You haven't withheld it; but you sat on it so quietly, nobody knew it was here, and you did nothing with it."
> Brief anger fired in the old priest's eyes. "It's time you met our founder, I think," he growled, pointing to the wood-carving in the corner. "He was a scientist like yourself before the world went mad and he ran for sanctuary.
> ....Shall I read you a list of our martyrs? Shall I name all the battles we have fought to keep these records intact? All the monks blinded in the copyroom? for your sake? Yet you say we did nothing with it, withheld it by silence."
> "Not intentionally," the scholar said, "but in effect you did - and for the very motives you imply should be mine. If you try to save wisdom until the world is wise, Father, the world will never have it."
> "I can see the misunderstanding is basic!" the abbot said gruffly. "To serve God first, or to serve Hannegan first - that's your choice."
> "I have little choice, then," answered the thon. "Would you have me work for the Church?" The scorn in his voice was unmistakeable.
>
> A Canticle, pp.184-185.

Though Miller takes a gentler line with science and the scientist than did Lewis or Noyes, he is by no means ready to present them as faultless, objective, disinterested men of superior intellection. Indeed, however brilliant, Thaddeo is by turns arrogant, petty, vain and humourless. Yet Miller's clerics are occasionally shown to be just as fallible, so one is left with the impression that Miller's depiction of science and the scientist is more balanced than that of his predecessors. For instance, Thaddeo is not without honour, as his decision to give the abbot the plans of the monastery's defences prepared by the officers of his escort shows, and in this he surpasses Lewis's conceited scholar, the opportunistic and self-seeking

Curry. For all that, Miller no more exempts the scientist from culpability for the use to which his inventions are put than did Noyes before him:

> When confronted by evil, this well-meaning but hypocritical scientist merely closes his eyes. He ignores, for the sake of convenience, his clear moral duty to oppose evil in any way that he can.
> ....Thon Thaddeo is connected with the scientists who, by disclaiming their responsibility, paved the way for the destruction that has already occurred and for that which will occur in the final chapter of the novel; and all of them together are identified with Pilate, who washed his hands to symbolize that he was free from any guilt in the death of Christ. But Pilate could not rid himself of the blame for Christ's crucifixion, nor can the scientists squirm out from under the burden of responsibility for the crucifixion of mankind on a nuclear cross.
>
> 44.

The flaws in the thon's personality emerge most fully as the second section of the novel draws to a close. '"...you sat on (science) so quietly, nobody knew it was here"', he accuses Paulo - for what Thaddeo cannot face is that his own victories, won painstakingly in the Collegium laboratory, are but the reiteration of what was once known and proved. Thus, his feelings have been hurt where they are most sensitive - his vanity and pride. Miller exploits this to the full at the climax of the second section. Such is his admiration of the people of the past that he can suggest - in fulfillment of his author's ironical twist - that contemporary mankind may not be their descendants: '"I only offer the conjecture that the pre-Deluge race, which called itself Man, succeeded in creating life. Shortly before the fall of their civilization, they successfully created the ancestors of present humanity - 'after their own image' - as a servant species."' The thon has at last gone too far for the abbot, as Miller shows in a vivid, uncompromising confrontation between them which suggests how diverse - even exclusive - their per-

spectives really are. The angry exchange culminates with the abbot's denunciation of the thon's motives:

> The scholar shrugged helplessly. "You see? I knew you would be offended, but you told me-- Oh, what's the use? You have your account of it."
> "The 'account' that I was quoting, Sir Philosopher, was not an account of the manner of creation, but an account of the manner of the temptation that led to the Fall. Did that escape you? 'And the serpent said to the woman-'"
> "Yes, yes, but the freedom to speculate is essential--"
> "No-one has tried to deprive you of that. Not is anyone offended. But to abuse the intellect for reasons of pride, vanity, or escape from responsibility, is the fruit of the same tree."
> "You question the honour of my motives?" asked the thon, darkening.
> "At times I question my own. I accuse you of nothing. But ask yourself this: Why do you delight in leaping to such a wild conjecture from so fragile a springboard? Why do you wish to discredit the past, even to dehumanizing the last civilization? So that you need not learn from their mistakes? Or can it be that you can't bear being only a 'rediscoverer,' and must feel that you are a 'creator' as well?"
> The thon hissed an oath. "These records should be placed in the hands of competent people," he said angrily. "What irony is this!"
> A Canticle, pp.192-193.

In a symbolic gesture with a wealth of implicit meaning, Kornhoer himself takes down the arc-lamp which has replaced the crucifix. But it is the abbot who returns the cross to its former place, declaring '"Who reads in this alcove henceforth, let him read ad Lumina Christi!"' Miller determines that the return of secular enlightenment into the world cannot eclipse the Light of the World and an older humanism; yet if the philosphia perennia prevails, so do the buzzards who grow fat off the bloody consequences of human conflict which provide a telling end to each section of the novel.

The closing section, Fiat Voluntas Tua ('Let Thy Will be done') is set in the thirty-eighth century A.D.; Lazarus, the anchorite, still roams near the Abbey of the Order of Saint Leibowitz in the city of Sanly Bowitts, and the Order of bookleggers and memorizers

still preserve the Memorabilia and have the cure of souls. However, much has changed since the days when a dying Dom Paulo of Pecos kept the Order from falling under the sway of Thon Thaddeo or a like-minded scientific successor of his. The Order has become the Church's college of former astronauts and has acquired a thoroughly modern role.

Even their patron saint's traditional reputation has not escaped change, Dom Zerchi ruefully reflects as he struggles with an undependable Autoscribe: 'in recent centuries (he) had come into wider popularity as the patron saint of electricians than he had ever won as the founder of the Albertian Order of Saint Leibowitz...' (p.206) The persistent unreliability of Zerchi's machine ironically symbolizes that even now technology is not faultless. Still, this is an age of space travel (and New Rome has another Holy Office, that of Cardinal Hoffstraff, Vicar Apost. Extraterr. Provinciae), electronics and info-tec, missiles, mass media, satellites and wholly automated interstate road traffic - and Quo peregrinatur grex. The political stakes are higher, too, with the Christian Confederacy vying on a geo-political scale with the Asian Coalition in much the same way as Hannegan once schemed against Hongan Os, Chief of the Plains, for continental hegemony. In some respects, this is the most forceful section of the novel.

> In part three, 'Fiat Voluntas Tua,' the will of God is made manifest in the destruction of the world by the union of science and technology, which has placed all the benefits of technology at the disposal of Lucifer.
> 45.

The Church's worst fears are to be confirmed. It has been powerless, tragically, to prevent the revival of a pernicious, progressive moral expediency which leads once again to a nuclear holocaust on

earth. Abbot Zerchi and Brother Joshua construe the signs and portents of the coming disaster, realizing that 'Lucifer is Fallen!' soon after the first two missiles are launched. As they pray for the preservation of the world, immediate measures are being considered in New Rome, and so they are given Hoffstraff's momentous command to 'reactivate Quo peregrinatur.' Consequently a missionary colony is despatched under the leadership of Father Joshua, just before the first missile strike of the 'Hot War' hits, to re-establish the Order on another world to serve the far-flung human colonies which will be all that remain of Mankind.

Quo peregrinatur grex may well appeal to the excitable reader who loves to be regaled with the images and symbols of Mankind's space age intelligence and prowess, but Miller has already reduced to absurdity these sources of pride and prestige in the very first page of Fiat Voluntas Tua: 'It was a species which often considered itself to be, basically, a race of divinely inspired toolmakers; any intelligent entity from Arcturus would instantly have perceived them to be, basically, a race of impassioned after-dinner speechmakers.' He continues in this satirical vein, 'It was inevitable, it was manifest destiny, they felt (and not for the first time) that such a race go forth and conquer the stars. To conquer them several times, if need be, and certainly to make speeches about the conquest.' (p.199) The "Church in Space" element of this last section is not developed at the expense of Miller's main preoccupation, the ineffable propriety of absolute moral values, and the redundancy of pragmatic ethics; and we may note the similarities between the new era inferred in Miller's novel - summed up by Russell M. Griffin - and those of Noyes, and Lewis, as well as of Farmer's short story:

> Joshua, charged with the preservation of the Memorabilia and the Apostolic Succession, becomes the new Everyman, charged with the duty to preserve and somehow reconcile scientia with sapientia so that man may be free at last of the old order which set morality against science, and may begin again within the limits of enlightened morality. 46.

The fatal flaw in the worlds of Ford, Frazier and Thaddeo lies in their inability to leaven scientia with sapientia. Miller's novel paints a bleak picture of the self-extinction of man on Earth, but he introduces a muted note of hope. Joshua's mission is to lead the clerical expedition to a new colony world, and his hope is that there people may grow without the terrible blight which causes the catastrophic cycle on earth:

> The closer men came to perfecting for themselves a paradise, the more impatient they seemed to become with it, and with themselves as well. They made a garden of pleasure, and became progressively more miserable with it as it grew in richness and power and beauty; for then, perhaps, it was easier for them to see that something was missing in the garden, some tree or shrub that would not grow. When the world was in darkness and wretchedness, it could believe in perfection and yearn for it. But when the world became bright with reason and riches, it began to sense the narrowness of the needle's eye, and that rankled for a world no longer willing to believe or learn. Well, they were going to destroy it again, were they - this garden Earth, civilized and knowing, to be torn apart again that Man might hope again in wretched darkness.
>
> A Canticle, pp.235-236.

Miller's perspective is a religious version of Spengler's theory of cyclical collapse. Human perfectibility is impossible; the nearer we approach a perfected world the more it seems to elude us, and we consume ourselves with frustration at the unattainable prospect. Convinced of the need for acceptance to balance aspiration, Joshua hopes that another world will offer Man a new beginning with a chance to grow properly in the light of the knowledge of our limitations. Only in Farmer's story can Everyman also be a defiant Prometheus, and

even then only because his conscience speaks to him more compellingly and correctly than the orders of his superiors.

Before the final curtain is rung down on Earth's second nuclear age, Zerchi becomes involved in two situations which intimate the essential qualities of Miller's religious sensibility. In the first, Zerchi challenges the legitimacy of the euthanasia being dispensed by a doctor at a tented emergency centre to victims of deadly radiation sickness.

The ethical question is not by any means a new one, and Zerchi's hostility is credibly full-blooded and angry; but his furious denunciations do not prevail against the persuasive force of the painless death offered by the modern medic to those who have been condemned to a lingering, hideous death. Both the doctor and the priest offer a species of compassion; but the medic's fell, if palpable variety cannot in any sense lessen the enormous responsibility borne by his fellow scientists for the disaster. For all his materialistic benevolence, Doctor Cors is in effect simply increasing that burden of responsibility by facilitating the deaths of the afflicted. The priest's compassion is quite different. He counsels acceptance to the dying, quite aware that this will probably not diminish their physical suffering one whit - indeed, it will extend it for most. But his standards are fixed by divine revelation and, to cull a phrase from Noyes, 'a higher order of reality'. Neither Cors or Zerchi can offer physical healing, but the priest is able to hold out the promise of salvation where Cors can only offer a painless end. For Zerchi there is no easy reconciliation possible between human suffering and the will of God, whatever it may be; all of us, even the new-born, must bear a measure of painful atonement. Only at the

end of his life does Zerchi experience something so mystical and moving as to confound the materialist, but the sign is for him alone. Kievitt has construed its end as follows: 'In the concluding section of the novel...man becomes united with God in the via unitiva by the rediscovery of prelapsarian innocence through the magnificent paradox of faith; man is destroyed, but it is only in his destruction that he is at last made whole.'(47) Miller's conclusion is apocalyptic.

Mrs.Grales, a mutant and now a social outcast on that account, repeatedly begged the abbot to baptize the other of her two heads, the one which since birth remained inert. Perhaps because it would create a canonical difficulty (two souls inhabiting the same mortal frame? which, if any, bears the burden of the sins committed by 'their' body?) Zerchi has always resisted her pleading. But lying in the radioactive ruins of his church in the wake of a nuclear attack, Zerchi is astounded to see her other head, Rachel, apparently come to life:

> ...the two-headed-woman wandered into sight around a heap of rubble. She stopped and looked down at Zerchi.
> "Thank God!" Mrs.Grales! See if you can find Father Lehy--"
> "thank god mrs.grales see if you can..."
> He blinked away a film of blood and studied her closely.
> "Rachel," he breathed.
> "rachel," the creature answered.
> She knelt there in front of him and settled back on her heels. She watched him with cool green eyes and smiled innocently. The eyes were alert with wonder, curiosity, and - perhaps something else - but she apparently could not see that he was in pain. There was something about her eyes that caused him to notice nothing else for several seconds.
> But then he noticed that the head of Mrs.Grales slept soundly on the other shoulder while Rachel smiled. It seemed a young shy smile that hoped for friendship. He tried again.
> "Listen, is anyone else alive? Get--"
> Melodious and solemn came her answer: "listen is anyone else alive-" She savored the words. She enunciated them distinctly. She smiled over them. Her lips reframed

> them when her voice was done with them. It was more than reflexive imitation, he decided. She was trying to convey the idea: I am somehow like you.
>
> But she had only just been born.
>
> And you're somehow different, too, Zerchi noticed with a trace of awe.
>
> A Canticle, p.274.

Rachel is no Frankenstein's monster; her Otherness is not threatening but redemptive, as Zerchi perceives when she spurns his attempt to baptize her, because she then offers the dying priest Communion, and afterwards, with a word she has not learned from him in their simple dialogue, she gives him a mystical parting benediction which can only be understood in the context of Zerchi's faith in the Life Eternal - '"Live."' Now the symbolism of Joshua's puzzling nightmare also becomes clear. During the first night of the war, he had seen himself struggling to save her from amputation. He heard Rachel identify herself as the Immaculate Conception (p.228) - a signal blasphemy - but his efforts to save her from the surgeon's knife are unavailing. Since the Brothers do not spurn Mrs. Grales or seek to correct her seeming deformity (as a well-intentioned doctor might) the apocalyptic potential Rachel embodies is preserved and the hope that the catastrophic cycle can be broken is revealed.

Zerchi dies, convinced that God has somehow sent a holy presence into the world at the time of man's worst crisis, a messenger "born" free from the taint of original sin:

> The image of those cool green eyes lingered with him as long as life. He did not ask why God would choose to to raise up from a creature of primal innocence from the shoulder of Mrs.Grales, or why God gave to it the preternatural gifts of Eden - those gifts which Man had been trying to seize by brute force again from Heaven since first he lost them. He had seen primal innocence in those eyes, and a promise of resurrection. One glimpse had been a bounty, and he wept in gratitude. Afterwards he lay with his face in the wet dirt and waited.
>
> Nothing else ever came - nothing that he saw, or felt, or heard. A Canticle, pp.276-277.

The decision to assign to A Case of Conscience by James Blish a fairly prominent place in this discussion of devout science fiction may seem strange given Blish's opening disavowal of religious conviction 'The author...is an agnostic with no position at all in these matters. It was my intention to write about a man, not a body of doctrine.'(48) This is all very well, except that - as was the case with the novels of Lewis and Miller - without the body of doctrine the interest the reader takes in Blish's man is quite depleted, for he is a Jesuit priest for whom Christian revelation is a touchstone, a goad and a guiding light. Ramon Ruiz-Sanchez S.J. is another of the legion of scientist-priests who, like the anonymous Father of 'The Star' or the missionary of 'An Alien Agony' - and big-hearted, bumbling John Carmody - find themselves thrust into impossible situations on unfamiliar planets tailor-made to test their faith and creed. As Ramon reflects shrewdly in complete and ironic innocence of his impending trial, 'An alien planet is not a good place to strip a man of his inner defences' (p.11) - unless, of course, that is the author's very intention.

That test has been constructed with considerable attention to detail, because for all his well-known opposition to John W. Campbell's insistence on absolute adherence to known science in predicting science, Blish shows in this novel (as in many others) that he can accomodate even such pedantic critics as Campbell. In a gesture which would do credit to Wells, the pioneering genius of self-consistent science fiction, Blish provides not only a plausible line passim, but an appendix describing the astrophysics, flora and fauna of Lithia, and - lovely touch - an opening 'Pronunciation Key' advising the reader on the phonetics of the speech of the Lithians.

Yet the novel succeeds on more than this instrumental level, as Harold L.Berger notes: 'so subtly does Blish build his plot and illuminate his characters that the mystery of evil transcends the mystery of cause."(49).

Fr. Ruiz-Sanchez is a member of a survey team studying Lithia to decide whether the planet can be declared safe for human access. The mineral-rich planet is enormously attractive to resource-starved Earth, whose Shelter economy is in a state of self-inflicted siege. The problems which afflict Earth in the mid-21st century are mainly the consequences of two familiar evils - world overpopulation and the debilitating struggle of nations not to lose their place in the global arms race. The outcome of the survey is of vital importance to Earth, because as it turns out its only worthwhile resource is bombs. Blish treats the subject in another three novels loosely linked by theme to each other and to this(50), and he shows that this sort of self-interested, quasi-Baconian scrutiny of nature by men is a promising arena for exploring the crucial meeting-place of morality and expedient exploitation. Baconian discovery has always been portrayed in the genre, even since its earliest days, as conferring great power upon the discoverer, and the surveyors are predictably excited. Only Ruiz-Sanchez seems unwilling to take Lithia at face value.

From the outset Blish focuses on the clash of materialism and faith in the deliberations of the four-man commission whose members he characterises as being either materialistic or religious. Where Miller was content to show Man as simply being whatever emerged from the genetic maelstrom of the Diluvium Ignis Blish advances two almost distinct sorts of modern man - scientific man (materialistic and

sceptical) and spiritual man, who rarely may also be a scientist. This accords with his purposes, since his story is not about humanistic aspiration after Faustus or Prometheus, but is instead clearly a story portraying the conflict between two contending visions of life.

> ...Christianity first recognized the theological threat of this idea and still refers to it as Manichaeism. Unlike polytheism, this dualism does offer a reasonable alternative to the logic of Catholic apologists. And sf's most sophisticated consideration has been, without question, A Case of Conscience.
>
> 51.

This conflict will be very much a personal issue for the priest, who ultimately is the only member to dissent from the team's recommendation to open the planet. For Ruiz-Sanchez, the problem is not merely one of how proper it is to waste another world to meet burgeoning terrestrial demands, or even whether the enslavement of the gentle Lithians as a workforce is an acceptable way of preserving Mankind; the Jesuit casuist must first be convinced that Lithia is not too good to be true:

> Since Lithians are completely rational, completely ethical, and completely atheistic, only their lack of a covenant with God suggests any secret compact with the Other. But the Lithians themselves seem indifferent to all such supernatural matters.
>
> Obviously, Ramon did not have to travel all the way to Lithia to discover proponents of such rationalism (i.e., atheism), and Ramon can reject its first principle as such. But the very apparent perfection of Litihan society invites Michelis to ask "'A question'...and his voice was painfully gentle. 'To set such a trap, you must allow your Adversary to be creative. Isn't that - a heresy, Ramon?'"
>
> 52.

The question facing Ruiz-Sanchez is, for him, crucial: is Lithia, for all its paradisal appearance, an instrument of the devil, or is it genuinely a part of the original Creation and therefore not a trap for grasping, materialistic mankind? The Lithians are gentle

beings, their society, in stark contrast to its terrestrial counterparts, a paradigm of enlightened rationality. Yet Ruiz-Sanchez is sceptical:

> It was probably just as well that the commissions's report on Lithia was about to fall due. Ruiz-Sanchez had begun to think that he could absorb only a little more of this kind of calm sanity. And all of it - a disquieting thought from somewhere near his heart reminded him - all of it derived from reason, none from precept, none from faith. The Lithians did not know God. They did things rightly, and thought righteously, because it was reasonable and efficient and natural to do and think that way. They seemed to need nothing else.
>
> Did they never have night thoughts? Was it possible that there could exist in the universe a reasoning being of a high order, which was never for an instant paralysed by the sudden question, the terror of seeing through to the meaninglessness of action, the blindness of knowledge, the barrenness of having been born at all? "Only upon this firm foundation of unyielding despair," a famous atheist once had written, "May the soul's habitation henceforth be safely built."
>
> Or could it be that the Lithians thought and acted as they did because, not being born of man, and never in effect having left the Garden in which they lived, they did not share the terrible burden of original sin? The fact that Lithia had never once had a glacial epoch, that its climate had been left unchanged for seven hundred million years, was a geological fact that an alert theologian could scarcely afford to ignore. Could it be that, free from the burden, they were also free from the curse of Adam?
>
> And if they were - could men bear to live among them?
>
> A Case of Conscience, pp.42-43.

The seeming ease with which Blish is able to manipulate the complex scientific and moral issues at the centre of the novel is attested in his confirmation of the priest's theological mistrust by a perception which only his secular calling allows him - each Lithian undergoes a recapitulative gestation and embryonic development which provides dramatic proof of Darwin's principle that 'Ontogeny recapitulates phylogeny.' Still, one suspects that clever though this is, the real basis of the case against the Lithians - perhaps even for Blish the 'agnostic' - is the priest's shocked appreciation of what their apparently innocuous lifestyle implies about the conventional moral

outlook of his Church, as Berger states: 'For intelligent life to have arrived at the unprovable moral axioms of Christianity through reason rather than faith constitutes, says the priest, "the most colossal rebuke to (the Church's) aspirations that we have ever encountered: a people that seems to live with ease the kind of life we associate with saints alone."'(53)

The priest decides that, against the verdicts given by his colleagues, he must vote to restrict access to Lithia because it is "a sending of the devil"; in other words, the whole planet is an artefact designed to trap Mankind by the world's oldest and most powerful Adversary.

Before consideration is given to the equivocal ending which Blish contrives in order to leave the "case" apparently unresolved, it is worth noting that he also brings attention back to earth in a lengthy central section which paints a grim picture of a Huxleyan - or worse - future. Since the moral arguments associated with dystopian writing after Huxley have already been rehearsed elsewhere, we may attend more closely what happens when a young Lithian is sent into Earth's hedonistic, amoral and completely irresponsible Shelter societies. Egtverchi, the Lithians' "ambassador" to earth, is both corrupter and corrupted:

> Egtverchi makes his debut as citizen at the gala staged by the wife of Lucien le Comte des Bois-Averoigne. This party to which Egtverchi goes is juxtaposed to the Lithia from which he comes. Behind him in Lithia are reason, order, moderation, graciousness, beauty. In the "underground mansion" of le Comte there is, as the location would suggest, a hell of chaos, excess, brutality and horror. The scene recalls the most ostentatious and excessive moments in The Satyricon... 54.

It is arguable that Egtverchi comes to Earth not, as Jo Allen Bradham goes on to suggest, as a sort of moral messiah but, conversely, as

the representative of the forces of a far deeper evil than even the hedonists of Earth can attain. This is evident from the perverse delight Egtverchi takes in orchestrating a disastrous global mutiny which collapses into simple violent anarchy when he makes his escape back to Lithia. Blish spells out Egtverchi's role much earlier even than this, however, when Ramon Ruiz-Sanchez is in Rome. His reaction when he hears a broadcast by the Lithian expatriate is surely not open to much misinterpretation:

> To Ruiz, at least, Egtverchi's voice came through. The accent was familiar and perfect. And this for an audience full of children! Had any independent person called Egtverchi ever really existed? If so, he was possessed - but Ruiz did not believe that for an instant. There had never been any real Egtverchi to possess. He was throughout a creature of the Adversary's imagination, as even Chtexa had been, as the whole of Lithia had been. In the figure of Egtverchi He had already abandoned subtlety; already he dared show Himself more than half-naked, commanding money, fathering lies, poisoning discourse, compounding grief, corrupting children, killing love, building armies --
>
> A Case of Conscience, p.153.

The novel's deliberately equivocal conclusion is further evidence of Blish's nimble reasoning and interest in the ways in which an event can be construed differently by partisan observers. Ramon has been ordered by the Pope to pronounce an exorcism on Lithia which he believes will result in the destruction of the world. At the same time - indeed, we are given to understand that it is in the very instant when the liturgical condemnation is uttered - Cleaver, one of the original members of the survey team, is running a very dangerous, speculative experiment on Lithia. When the world blows up, we are left to decide whether the world has been destroyed by the Wrath of God or by the hand of Man, for either fits Blish's premises equally well. Yet however dangerously close the conclusion comes to seeming a casual contrivance, it does show that Blish is still playing his game

by the rules. He is astute enough to realize that for the devout, Providence is the answer to Positivism.

The first section of Blish's novel is clever and original, but it lacks the conviction of others discussed here (and whatever its shortcomings as literature, even Noyes's story lacked nothing in that respect). This does filter through the other stories as an unmistakeable intensity of argument and moral certainty, at its best, and at its worst, a moral self-righteousness. Not simply because Blish has publicly declared himself to be uninterested in doctrinal quibbles - even professing himself an agnostic - one may discern a quality about the novel which reveals his detachment. Perhaps what he does not manage to evoke could be described as the spiritual passion which gives a distinctive energy to the stories of devout writers like Miller whose science fiction is a personal testament of faith, or committed ones like Skinner who believe in human perfectibility. Blish's detachment is seen in an exaggerated care to show the awe Ramon feels towards the Pope, and in the facility with which he collates and advances his line of reasoning about the human consequences of Original Sin - by no means a more or less intellective matter to the devout. Whether or not one is inclined to see this as a weakness, there can surely not be any doubt that Blish has demonstrated an impressive ability to manipulate the central concepts deftly.

More significantly, Blish's cerebral novel recognizes that an understanding of moral perplexities is contingent uniquely upon the religious ethics with which most ideologies - be they personal or social - are imbued. In this, he implicitly acknowledges the propositions of the devout tradition which are criticised by anti-clerical materialist writers like Wells and Moorcock.

REFERENCES and FOOTNOTES

1. J.Norman KING, 'Theology, Science Fiction and Man's Future Orientation'; in Many Futures, Many Worlds ed. by Thomas D. CLARESON, Kent State University Press, 1977; p.238

2. C.P.SNOW, The Two Cultures and A Second Look; Cambridge University Press, Cambridge, 1963.

3. Jack LONDON, judging by his 1907 novel, The Iron Heel, was no less interested in the nature of contemporary scientific and philosophical schools of thought. Here is the redoubtable Ernest Everhard, having asserted that science (by which, probably after Marx, he means materialism) has done more to benefit mankind than any other philosophy, trying to discredit Dr.Hammerfeld and Dr. Ballingford:

> "There is another way of disqualifying the metaphysicians," Ernest said, when he had rendered Dr.Hammerfield's discomfiture complete. "Judge them by their works. What have they done for mankind beyond the spinning of airy fancies and the mistaking of their own shadows for gods? They have added to the gaiety of mankind, I grant; but what tangible good have they wrought for mankind? They philosophised, if you will pardon my misuse of the word, about the heart as the seat of the emotions, while the scientists were formulating the circulation of the blood. They declaimed about famine and pestilence as being scourges of God, while the scientists were building cities and draining marshes. They builded gods in their own shapes and out of their own desires, while the scientists were building roads and bridges. They were describing the earth as the centre of the universe, while the scientists were discovering America and probing space for stars and the laws of stars. In short, the metaphysicians have doing nothing, absolutely nothing, for mankind. Step by step, before the advance of science, they have been driven back. As fast as the ascertained facts of science have overthrown their subjective explanations of things, they have made new subjective explanations of things, including explanations of the latest ascertained facts. And this, I doubt not, they will go on doing to the end of time. Gentleman, a metaphysician is a medicine man. The difference between you and the Eskimo who makes a fur-clad, blubber-eating god is merely a difference of several thousand years of ascertained facts. That is all."
>
> The Iron Heel, pp.12-13.

Everhard waxes lyrical in denunciation when Ballingford smugly observes that "the thought of Aristotle ruled Europe for twelve centuries."

> "Your illustration is most unfortunate," Ernest replied. "You refer to a very dark period in human history. In fact we call that period the Dark Ages. A period wherein science was raped by the metaphysicians, wherein physics became a

search for the Philosopher's Stone, wherein chemistry became alchemy, and astronomy became astrology. Sorry the domination of Aristotle's thought!"

Naturally neither of these cardboard academics are astute enough to quibble with the breathtaking hindsight Everhard - a blond beast out of Neitzsche(idem. p.8) - allows himself; still I suppose one must make exceptions for "supermen" who have the author's indulgence.

4. Snow's observations on the nature of the cultural group he claims to speak for seem rather casual, even ill-considered.

> They may or may not like it, but they have it. That was as true of the conservatives J.J.Thomson and Lindemann as of the radicals Einstein or Blackett: as true of the Christian A.H.Compton as the materialist Bernal: of the aristocrats de Broglie or Russell as of the proletarian Faraday: of those born rich, like Thomas Merton or Victor Rothschild, as of Rutherford, who was the son of an odd-job handyman. Without thinking about it, they all respond alike. That is what a culture means.
>
> p.10

It is hard to believe that such a celebrated, even feted, author could display such staggering naivety in defining such a disparate group as a "culture" by seizing upon - as their only shared characteristic - something as narrow as their psychological response to a particular theoretical challenge within the natural sciences. However outstanding their own special contribution to a generally-accepted understanding of the universe, Snow ignored expeditiously all their individuality in thus lumping them together. One wonders, in trying to swallow Snow's outrageous sequel, how many scientists would be content to be depicted as the out-and-out, indeed deliberate, philistines as he suggests:

> They have their own culture, intensive, rigorous, and constantly in action. Their culture contains a great deal of argument, usually much more rigorous, and almost always at a higher conceptual level, than literary persons' arguments...
>
> Remember, these are very intelligent men. Their culture is in many ways an exacting and admirable one. It doesn't contain much art, with the exception, and the important exception, of music. Verbal exchange, insistent argument. Long-playing records. Colour-photography. The ear, to some extent the eye. Books, very little....
>
> p. 12 & 13.

I may say that I am not persuaded by Snow that scientists are such simple, even philistine creatures. Snow's nonsensical oversimplification of what one might well call - in his terms, of course - 'the scientific animal' - would be laughable had he not made it in such utter seriousness, and so self-confidently.

5. F.R.LEAVIS, 'Two Cultures? The Significance of C.P.Snow'; Chatto & Windus, London, 1962.

6. James GUNN, The Road to Science Fiction Vol.II; New English Library, London, 1979; p.35.

7. Idem., p.34.

8. According to its introduction, the novel was in fact written in 1843 though it wasn't published, by Wertheim, MacIntosh and Hunt, until 1859 - the same year as Charles Darwin's On the Origin of Species.

9. > I was soon transported to the world of visions and found myself engaged in scenes and actions, which presented themselves before me, as was not usual in my sleep, in the vivid colours and mesh of the connected progress of real events. Their very similitude became more striking by seeming to connect themselves in time and place with my actual condition.
> Methought it was morning, and I rose early as if to fulfil my intention of setting out on my proposed journey...
> A Dream, p.2.

Despite some initial success with the dream device, which in the early stages is used in an uncomplicated way, as the novel progresses Mrs. Penny clearly became less interested in apparent veracity or reportage, at one point even suggesting that the narrator's facility with dreaming was such that he was able to manipulate reality according to what he dreamt, a literally fantastic idea which she later discussed at some length in her Introduction.

10. As the closing reference to Pilgrim's Progress of the Introduction indicates.

11. For all its oddly forced topicality (there are trains and some other evidence of the awareness of the effects of Progress - chiefly in the form of astronomical or other allusions to splendid architecture rather than anything more specific like, for example, Poe's 300 m.p.h. trains), we cannot be really sure whether dream-time is much in the future, or strictly immediate. As the successive phases of dreaming occur, dream-time does pass into the near future, but in general the world seems a progressive rather than futuristic place. Perhaps this suggests how bewildering was the rate of change in contemporary society to those who experienced it.

12. One is reminded of the overgrown machine-halls and museums which Wells's Time Traveller found in the world of the Morlocks and Eloi, though there the author's tragic theme was of the abandonment of science rather than, as here, the evident triumph of technology and the decline of religion.

13. Further reference to Mrs.Penny's intriguing little book is made in Chapter 7.

14. J.O.BAILEY, Pilgrims Through Space and Time; Argus Books Inc., New York, 1947; p.321.

15. Alfred NOYES, The Last Man; John Murray, London, 1940.

16. I.F.CLARKE, Voices Prophesying War 1763-1984; O.U.P., London, 1966; p.176.

17. Another symbolic confrontation between Noyes's "two cultures," as it were, forms the basis of Chapter XIV, which is basically a key disquisition on the virtues of Renaissance humanism. Noyes's target is unmistakeably avant garde modernism - futurism - which he slated in a comparison with Renaissance art; the Bolsheviks also attracted his ire. Note particularly his devout vision of the Christian faith and its moral values (personified as 'Christendom') as a truly progressive ideal; this is one of the book's most lyrical passages.

> An odd claim to "distinction" and "significant form" had been made for "The Abortion", on the ground that it was an "abstraction". But in actual and precise fact, this "abstraction" was a fairly accurate representation of the embryo of an ape. It was laid, like the head of Baptist John, on a large platter of "Art" pottery. It had a surgical instrument on each side of it, like a knife and fork; and round it there was a garnishing of sufficiently representative "phallic symbols".
>
> .....In the journal which Mark now held in his hands ("The Bomb") all the poor old commandments...were derided as the taboos of an ancient and ridiculous bourgeoisie. But, in a leading article, on the political situation, the writer's country was still described as "Christian"; and the breaking of political pledges by foreigners was denounced with hypocritical smugness, as a violation of precisely those "bourgeois" principles which, according to almost every other page and certainly in every other book praised by their literary columns - could have no possible justification in reality. And all this while Christendom - if only they had known it - was waiting with her replies to all their bewilderment; replies infinitely deeper and more complete than they had ever dreamed of; replies that embraced the depths and heights of the philosophia perennia, and carried with them a thousand subtle and true possibilities of really new discovery in art, thought and life.
>
> Over them [dead art critics], the deep eyes of Raphael's "Mother and Child" looked through the ages, with that spiritual glory of which the human race had caught one fleeting glimpse, and then lost it for ever. But it had been no remote glory. It was a discovery of the essential worth and dignity of the individual human soul, where man - after his long evolution - had emerged into a higher order of reality, and recognized his own relationship to the spiritual world and to God. Every earthly mother, in that recognition, shared the hallowed secret of the Magnificat. Raphael had seen it shining in the quiet eyes of the Italian peasant girl - his Madonna - whose child was her king, and would lead the nations into the ways of peace.
>
> The Last Man, pp.102-104.

18. Evelyn's redemptive influence appears most strongly in her pious bearing and devout observance of the Commandments, but

is also attested by her success in bringing Mark, a non-believer, to appreciate the virtue of her creed, and become a Catholic. This is a symbolic reversal of Eve's temptation of Adam, the direct cause of his Fall from Grace and expulsion from Eden.

19. Included in Mayo MOHS'S anthology of religious science fiction short stories, Other Worlds, Other Gods; Doubleday & Co., New York, 1971.

20. From his 1953 short story anthology, The Golden Apples of the Sun, which contains, amongst a wide range of other sorts of fantastic and mystery fiction, a number of quite famous science fiction stories such as 'Embroidery', 'The Pedestrian', 'Powerhouse', and 'A Sound of Thunder'.

21. A passage from his lengthy "Cantata" included in I Sing the Body Electric, another anthology of short stories published in 1970.

32. It is easy to discern in the Alphas of Brave New World, the engineers and managers of Ilium, and O'Brien in his urbane forerunner Mond.
Whatever its flaws, Huxley's novel has achieved a deservedly impressive reputation among genre critics; such is its stature and enduring influence that no serious study of the genre has neglected it. SCHOLES and RABKIN include it in their 'Brief Literary History of Science Fiction' associating it thus with Zamyatin's We, and (I infer) with Walden Two:

> Before turning from the social and philosophical fiction of Europe to the pulp magazines of America, we should consider one more writer whose influence on later science fiction was profound. Aldous Huxley, the grandson of H.G.Wells's biology teacher, produced in 1932 a work of dystopian future projection so lively and so appalling that it has never been out of print. ...Where Zamyatin had painted a vivid picture of oppressive totalitarianism, Huxley gave us a society run by benevolent behaviourists, which proved almost as terrifying.
> Science Fiction: History, Science, Vision; p.33-34

Brian ALDISS has called Brave New World 'arguably the Western world's most famous science fiction novel' and noted that it retains its 'pleasing originality' (Billion Year Spree, pp.215 & 217); Patrick PARRINDER (in Science Fiction, Its Criticism and Teaching) considers it to be an archetypal novel: 'The debunking of Utopia exemplified by Aldous Huxley's Brave New World remains the representative expression of twentieth century anxieties.'(p.78) For Thomas CLARESON Huxley's novel is simply 'The Classic', a yardstick, as it were, he would promote as an index against which the qualities of other generic novels could be assessed:

> The continued recognition given Aldous Huxley's Brave New World, including its widespread use in the classroom, certainly suggests that it be regarded as the classic anti-utopian novel. Yet it is seldom referred to - at least in general academic

circles - as science-fiction. Perhaps a close examination of the novel will allow us to see how it transcends "mere" science-fiction and becomes a modern classic. In view of its success, such an examination may provide, if only implicitly, some standards by which may measure the artistry of any science-fiction.

'The Classic: Aldous Huxley's Brave New World';
Extrapolation 2 (May 1961); p.33.

I would in passing draw attention to Clareson's clear preoccupation with the 'central problem' ("ever-popular vexed question" might be a more accurate reflection of this perennial debate) of evaluating the merit and standing of generic science fiction relative to 'the mainstream'. The customary questions address issues like the nature or definition of science fiction: is it a literature of 'cognitive estrangement', as Darko Suvin has contended; is it more helpful to see it, with Scholes and Rabkin, as possessing particularly splendid or pure examples of 'structural fabulation'; or should it be seen as a species of fantasy, devoid of significance as realistic fiction; or Trivialliteratur, Tendenzroman or high-minded speculation about the future, projection, prediction - even prophesy - or, simply 'The Literature of Ideas'? Of course, the single answer is that science fiction can be any of these; the most appropriate label being a matter of evaluating a given work's premises - as Damon Knight argued pragmatically (in A Sense of Wonder) science fiction 'means what we point to when we say it.' Nonetheless Clareson's concern is revealing; as most science fiction critics I have read agree, a generic novel may well be undervalued because it reflects a genre of fiction which is not well-regarded widely. Recalling his own youthful interest in science fiction, C.S.LEWIS wrote (in 'On Science Fiction') of the 'double paradox' which attends the stories which claim a place in the genre:

> I had read fantastic fiction of all sorts ever since I could read, including, of course, the particular kind which Wells practised in his Time Machine, First Men in the Moon and others. Ten, some fifteen or twenty years ago, I became aware of a bulge in the production of such stories. In America whole magazines began to be exclusively devoted to them. The execution was usually detestable; the conceptions, sometimes worthy of better treatment. About this time the the name scientifiction, soon altered to science fiction, began to be common. Then, perhaps five or six years ago, the bulge still continuing and even increasing, there was an improvement: not that very bad stories ceased to be the majority, but that the good ones became better and more numerous. It was after this that the genre began to attract the attention (always, I think, contemptuous) of the literary weeklies. There seems, in fact, to be a double paradox in its history: it began to be popular when it least deserved popularity, and to excite critical contempt as soon as it ceased to be wholly contemptible.
>
> 'On Science Fiction.'

Reprinted in Science Fiction, A Collection of Critical Essays, edited by Mark ROSE for Prentice-Hall's Twentieth Century Views.

Lewis further observed tellingly that, 'to devise a definition (of the novel) for the purpose of excluding either The Waves in one direction or Brave New World in another, and then blame them for being excluded, is foolery.' While he does condemn those stories which 'leap a thousand years to find plots and passions which they could have found at home', he asserts in general that, however they are to be defined, 'they are to be tried by their own rules.'

23. This retrospective discussion of his own novel is included with it in the Panther edition (London, 1979).

24. Note how strikingly like the Brave New World is Mardok's dark dream, the creation of an amoral, behaviourally-conditioned society with himself occupying its apex and enjoying divine privileges and power:

> Science and mechanism, in the hands of an autocrat, would solve all problems and and control everything and everyone except the controller himself. But there were to be no more morals, or "taboos," as he called them; for science would replace the primitive inhibitions of conscience, and make it possible to enjoy many things which formerly were regarded as forbidden fruit. They would be gods, above good and evil. Religion would be abolished.
> The Last Man, p.132.

25. Clareson, op.cit., p.36.

26. Thus, another durable theme is established, one used by many writers, especially Orwell who recast it as one of the most chilling principles of Ingsoc and Doublethink, 'the mutability of the past'.

27. Here John echoes D.H.Lawrence's angry exhortation, "For God's sake let us be men, not monkeys minding machines."
Aldiss argues persuasively (in Billion Year Spree, p.216) that John is the most obvious weakness of the novel:

> The weakness of the book...lies in the character of the Savage, whom Huxley introduces to symbolize the world of the spirit which the Ford-founded utopia has banished. The Savage is never credible... The Savage is a wise young man who quotes Shakespeare too much and never ceases to be a twenties stereotype of untrammelled youth drawn by a man who had known D.H.Lawrence personally.

Huxley himself remarked on this problematic characterisation of John in 'Brave New World Revisited'. At the distance of some fourteen years, he makes the interesting observation that 'For the sake, however, of dramatic effect, the Savage is often permitted to speak more rationally than his upbringing among the the practitioners of a religion that is half fertility cult and half Penitente ferocity would actually warrant.' Clearly Huxley intended the Savage to be the torn embodiment of two contending ideologies which make quite different demands upon his sensibility: one affective and mystical, the other cognitive and rational.

While these two contending ideologies - materialism and spirituality - are not quite congruent with the two alternatives facing John ("an insane life in Utopia, or the life of a primitive in an Indian village, a life more human in some respects, but in others hardly less queer and abnormal"), they are obviously related to the mystical/rational dichotomy which Huxley built in to his alienated champion of individuality. (See also 31, below)

28. Clareson, op.cit., p.38.

29. Harold L.BERGER, Science Fiction and the New Dark Age; Bowling Green University Popular Press, Bowling Green, Ohio; 1976. Berger identifies the ubiquity of 'synthetic' experience, embracing both the vicarious and the surrogate forms Huxley contrived to give credibility and force to his hedonistic earthly paradise, as the recurrent symbol of the shallowness of the lives led by the citizens of the world of Our Ford/Our Freud:

> The synthetic experience assumes several forms. What marks them all is an obliterated or diminished awareness of the self and the significance of experience by needless complication or mechanism, which excludes or distracts the self from reality and full participation in its own life... The synthetic experience of Huxley's society empties life so thoroughly that only the most perceptive suffer in the void... p.38.

30. B.F.SKINNER, Walden Two; Macmillan Publishing Co., New York; 1976.

31. Yet, for all his emphasis on the cognitive or rational, Huxley never wholly rejected religion, as he makes plain in his retrospective discussion of how he could improve Brave New World, were he minded to, shows. This is of particular interest in view of the rationalistic ideal world Skinner described in his novel, published some two years later:

> ...If I were now to rewrite the book, I would offer the Savage a third alternative. Between the utopian and primitive horns of his dilemma would lie the possibility of sanity - a possibility already actualized, to some extent, in a community of exiles living within the borders of the Reservation. In this community economics would be decentralist and Henry-Georgian, politics Kropotkinesque and co-operative. Science and technology would be used as though, like the Sabbath, the had been made for man, not (as at present and still more in the Brave New World) as though man were to be adapted and enslaved to them. Religion would be a conscious and intelligent pursuit of man's Final End, the unitive knowledge of the immanent Tao or Logos, the transcendent Godhead or Brahman. And the prevailing philosophy of life would be a kind of High Utilitarianism....
>
> 'Brave New World Revisited', pp.8-9.

While it is tempting to speculate that Skinner's vision of a sane utopia could have been partly an attempt to depict Huxley's ideal society (the 'sane alternative' never open to the Savage in Brave

New World itself), we may be certain that the prophylactic sort of religious experience described in Walden Two would not have been seen by Huxley as genuine or worthwhile. This sets him apart from the iconoclastic sceptics who reject all religion as primitive or conservative mystical fantasy.

32. Harold L.BERGER has written (op.cit.) a very valuable discussion of Skinner's novel; while his concerns and my own in assessing the novel differ somewhat in emphasis and scope, I would direct the attention of the interested reader to his commentary, especially for his perceptive analysis of the arguments with which Joseph Wood Krutch countered Skinner's line, and rejected Walden Two, in The Measure of Man.
Berger prefaces his discussion of Walden Two (the centrepiece of 'Ignoble Utopias', the second half of a sweeping first chapter, 'The Threat of Science') with a summary - which I have abridged - of the often hostile reception Skinner's novel was given:

> Then Skinner (a Professor of Psychology at Harvard, author of the influential Science and Human Behavior and Beyond Freedom and Dignity, and most respected spokesman for 'behaviorism' in the field of psychology) reveals, with a touch of personal hurt, 'To my surprise, the book was violently attacked.' The attackers: Life Magazine, Glenn Negley and J. Max Patrick, Joseph Wood Krutch, and others. In a rabid denunciation Life called Walden Two a 'menace,' presenting as desirable a society whose engineered 'Skinnerites' are as free as Pavlov's dogs. 'Such a triumph of mortmain, or the dead hand, has not been envisioned since the days of Sparta.' Its allusion to Thoreau is 'a slur upon a name, a corruption of an impulse." Negley and Patrick confess that they found Skinner's utopia so absurd that they read half through the convinced that it was a masterful satire on 'behavioral engineering.' When they realized Skinner was serious, they declare, 'not even the effective satire of Huxley is adequate preparation for the shocking horror of the idea when positively presented. Of all the dictatorships espoused by utopists, this is the most profound...' ...'Nauseating,' 'a nadir of ignominy' is the verdict of Negley and Patrick.
>
> .....
>
> .....
>
> The impact of Skinner's book is now history. No modern utopist's vision has stimulated a greater reaction than Skinner's, and that reaction has been largely and heatedly negative. Macmillan's 1966 paperback printing acknowledges on its back cover that Skinner's 'modern utopia has been a centre of raging controversy ever since its publication in 1948.' It excerpts some critical comment: 'An extremely interesting discourse...'(The New Yorker); 'A brisk and thoughtful foray...'(Charles Poore, New York Times); but it also quotes the acid verdict of Life and the barb of Orville Prescott (New York Times) - 'Alluring in a sinister way, and appalling too.' One can add liberally to the list of critics who find, as Prescott, the 'engineering' of Walden Two sinister and appaling, or who, without mentioning the novel, are disturbed by Skinner's views and what behaviorism portends

for the human race. Joseph Wood Krutch, Donald C. Williams, Andrew Hacker, Carl R. Rogers, George Kateb, Karl Popper, and Arthur Koestler share the fear that something essentially and preciously human is threatened by the techniques of behavioral science. Indeed, they fear that humanness itself is in jeopardy. They must recoil from the arrant optimism of Robert L. Schwitzgebel, who pronounces, 'Behavioral engineers are lucky, I think. They are preparing to invite men to a feast of new sounds and sights and feelings so powerful, wonderful and compassionate that the word 'men' will not adequately describe them.' But this is precisely what many of the 'invited' are afraid of, they want to remain "men." .....Clearly, if man now takes charge of his own evolution, a few men, the Skinners and Schwitzgebels, will play creator in a new Genesis. Yet the old order hangs on tenaciously in act and word....

Abridged from: Science Fiction and the New Dark Age; pp.51-54.

33. Bailey, op.cit., p.311.

34. Scholes and Rabkin, op.cit., p.43.

35. Berger, op.cit., p.10; somewhat confusingly, while he writes here of Lewis's 'anti-scientism', he asserts on the next page that 'Lewis does not oppose science as such or modern technology.' The line he takes does reflect something of Lewis's own explicit antipathy to materialistic expediency:

> What he does oppose is the idea that man's power to shape confers the right to shape and abrogates human, natural, and divine right and law. Carried to the extreme this idea only allows one right and law: the right and imperative of power to more power. To be sure, not science alone, but state, church and individual are susceptible to such corruption; but since science alone, by its own ethos, can admit no resting-place in the search for knowledge, it is least able to resist converting knowledge into power, power which can become its own motive force.

but I fear his earlier observation really is the more sensible, especially since Lewis clearly was capable of 'anti-scientism' for the very reason Berger advances in his attempt to prove Lewis did not 'oppose science as such' but merely the scientific ethic, that is, science is the means whereby man experiences the temptation, and indeed appreciates what is understood to be the benefit, of abrogating other moral or ethical codes.

36. Mayo MOHS, in the introduction to his collection of religious science fiction short stories, 'Science Fiction and the World of Religion' (Other Worlds, Other Gods: Adventures in Religious Science Fiction, pp.11-17), cast Lewis's trilogy as a paradigm of imaginative orthodoxy:

> Indeed, some of the most imaginative of religious science fiction, if that is the term, has been built on the very rock of orthodoxy. For C.S.Lewis, the worlds of fantasy and science fiction were not at all incompatible with deep and conservative Christian faith - a contention he demonstrated handsomely in his literate trilogy... His Perelandrans, for instance, were simply creatures who had not fallen from primordial grace and thus retained special powers (Thomas Aquinas called them 'preternatural gifts') which sinful humans had lost with Eden.

There are, however, dangers inherent in over-stressing the orthodox character of Lewis's fiction in this way, as Paul L. HOLMER reminds us repeatedly in his monograph, C.S.Lewis: The Shape of his Faith and Thought:

> Lewis though it odd that anyone should read poetry with the intent of ascertaining thereby the poet's state of mind. He called that The Personal Heresy. Equally, something of the same can be said of Lewis's religious literature. It is not confessional or even a profession of his beliefs. Instead, it is at one and the same time argumentative and persuasive. It ought to be noted that Lewis's Christian literature is both sophisticated, in that it supports highly developed thoughts, and popular, in that it appeals to a wide range of readers. ...On the other hand, it is not as though his literature hides his personal commitments, whether theological, philosophical, or literary.
>
> Op.cit., p.9.

37. William A.QUINN, 'Science Fiction's Harrowing of the Heavens'; The Transcendent Adventure, ed. By Robert Reilly (pp.37-54); p.42.

38. Margaret R.GRENNAN, 'The Lewis Trilogy: A Scholar's Holiday'; from Catholic World 167, (July 1948), p.341.

39. Quinn, op.cit., p.42.

40. Scholes and Rabkin, op.cit., p.45.

41. As Margaret R.Grennan has also noted,

> That Hideous Strength is more clearly a novel with a thesis. Fortunately, however, Lewis had already written a brilliant exposition of the them in the Riddell lectures given in 1943 and published recently under the title The Abolition of Man.
> .....
> As for the individual, everything will be done to eliminate what is personal, emotional and imaginative. We will become "Men without Chests," as Lewis states in the first lecture of The Abolition of Man, - creatures with minds and viscera, but no hearts. The fantastic experimentation of the Bilbury group and their attempt to prodce and prolong life in a decapitated head, is the extreme expression in modern allegory of an educational philosophy that is all too familiar, and the pursuit of which will result in a generation cold,

mechanistic, incpable of spirituality, and convinced of the impossibility of ever knowing truth here or anywhere. When such a view becomes the active, organising principle of men, self-destruction is inevitable, and unintelligibility, symbolized by the confusion of tongues at the Belbury Banquet, makes of the world a new Babel, "hideous in its strength". Op.cit., p.343.

42. Frank David KIEVITT, 'Walter M.Miller's A Canticle for Leibowitz as a Third Testament'; The Transcendent Adventure, ed.Reilly, p.171.
Kievett underrates the significance of the dichotomy central to 'Fiat Lux' where the representatives of religion and science compete for control of the Memorabilia.

43. Russell M.GRIFFIN, 'Medievalism in A Canticle for Leibowitz'; Extrapolation pp.111-125; p.115.

44. M.A.BENNETT, 'The Theme of Responsibility in Miller's A Canticle for Leibowitz'; English Journal 59, (April 1970); p.486.

45. Kievitt, op.cit., p.172.

46. Griffin, op.cit., p.124.

47. Kievitt, op.cit., p.173.

48. This Foreword by Blish accompanies the novel in my 1975 Arrow Books edition; interested readers may also wish to read his own critical review of his novel ('Cathedrals in Space') penned as William Atheling and included in The Issue at Hand.

49. Berger, op.cit., p.132.

50. The novels are Doctor Mirabilis, Black Easter and The Day of Judgement; with A Case of Conscience, they are collectively called After Such Knowledge.

51. Quinn, op.cit., p.43.

52. Quinn, idem.

53. Berger, op.cit., p.131.

54. Jo Allen BRADHAM, 'The Case in James Blish's A Case of Conscience' Extrapolation 16 (1974); pp.67-80.