Science fiction and fantasy play an important role in shaping the future while stimulating readers' imaginations. They expand our consciousness and provide living images of the world of creation, not as it is or was, but as it has the potential of becoming. Any literature, art form, or medium of expression which is capable of affecting the imaginative processes of modern man is not a distraction, it is an important force in shaping the collective dream of society. Science fiction is making it possible for mankind not only to imagine earthly paradises, commercial or visionary, but also to create them, make them work, and live within them. The utility of science fiction is that it prepares mankind for those changes of consciousness which alter experience. The contributions of science fiction to the literature on the imagination are varied, and science fiction has also been seen as the new mythology. (RB)
CERTAIN ASSISTANCES

The Utilities of Science Fiction

and

Fantasy in Shaping the Future

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This study of the effects of science fiction and fantasy upon the imagination is a speculative one. The conclusions reached as the result of questioning the uses of science fiction in shaping the future represent extrapolations of argument rather than my own expectations. They are a kind of speculative believing. I have placed my emphasis upon the utility of speculative literature (used here as a shorthand term for both science fiction and fantasy) as productive of good because I do not see any long term evils arising from the literature; although I recognize that there are some critics who do. At worst, the poorer and weaker examples of the genre have the same sort of self-destructive quality as all other bad books, and they are quickly and mercifully forgotten. The better works which have or seem to have a lasting value as literature also have certain important related values as well. This paper is an attempt to account for those related values and to speculate upon the impact they are having now and will probably continue to have in the future upon the evolution of human consciousness.
Our topic is the role of science fiction in shaping the future, and I will develop my approach to it by starting with a quibble over terms. It is an important quibble, however, and it has to do with the idea of whether we may speak rationally of shaping the future. Indeed, in a sense, everything that follows is an attempt at answering the implications of that question. We all know, although sometimes we must remind ourselves, that we cannot speak literally of shaping the future. The future exists only potentially. It is true that present choices help to give shape, substance, and dimension to the future as it actually unfolds; but there is nothing necessary in the connection. Chance, irrational actions and events, destiny, and what we may broadly call the forces of history all converge in helping to shape our tomorrows. In "The Perils of Futurist Thinking," Joseph Sittler cautions wisely against taking the term "shaping" literally. The expression has value as a figure of speech, but it is not the basis for a method upon which any valid reasoning may proceed. This does not leave us impotent, however. What we shape, of course, if we shape anything at all, is our ideas, our own thinking about and attitudes toward the future, while we remain in the present. Such thinking about the future is a kind of protest against being time-bound in the present and expresses man's determination to control his environment and direct his own destiny.

In this paper, I will try to keep the implications of this truism before me without tediously reiterating it. Ways of thinking have been translated historically into future realities. But since the future is a problematic unknowable, we cannot foretell without prophetic gifts
which thoughts will become tomorrow's hardware, values, or assumptions.
We can try to influence this process, of course, and that is the basis of
our theories of educating youth.

Isaac Asimov pointed out another truism at the 1974 Science Fiction
Research Association Seminar on "The Need for Science Fiction to Anticipate
the Future." In Asimov's view, the one thing that all science fiction stories
are telling us about the future is that it will be different from the present.
Moreover, although this is a self-evident enough truth, most people do not
believe it or at least they do not want to believe it. Any psychologist will
tell us why this is so. It is, unless I am mistaken, that the present is a
known quantity and however bad it may be we are adjusted to it or maladjusted
to it already. Contemplation of future adjustments, however, produces a certain
level of anxiety in everyone. Several speakers at the conference, notably
Irving Buchan and Charles Elkins, spoke of the inherent playfulness of science
fiction and of its youthful vitality, arguing that the implied dialectic of the
literature is a letting go of the past and the present so that we may have a
heightened awareness of the future. We may see in this dialectic a potential
cure for the sort of anxiety which the contemplation of future changes is likely
to produce. But, as Irving Buchan argues, even the future must be let go in
order that we may grasp or hold on to that which is new and needed. This
operative definition of the genre emphasizes an important truth about science
fiction; like the Greeks of Matthew Arnold's "The Scholar Gipsy", those "light-
hearted masters of the waves," our science fiction writers must remain free
in their imagination, playful, speculative, and exempt from cant if they are
to assist us in our letting go of the past, the present, and our fears of the
future in order to hold on to the truth—the future is going to be different,
and we cannot shape it directly. However, in shaping and reshaping our thinking
about the future, we are doing something worthwhile and even necessary. I do
not mean to hold out the hope that speculations about futures have a pragmatic
value, although they may; but they appear to me to have another sort of value, and it is to this sort of value that I wish to address myself.

If we may speak of a utility of science fiction and fantasy, I think we must say, then, that there are several kinds of utility involved. The most straight-forward and dramatic utility is the pragmatic, which considers the benefits of science fiction as an inspiration for new technology, new science, or even for new careers in the sciences. This is the utility explored by Charles Waugh in his paper on "The Influence of Science Fiction upon Scientific and Technological Innovations." Another and related utility is explored by Professor Robert Flanx; and there are still other practical utilities, some of which are featured in Professor Samuelson's discussion of his work with future studies.

But there is a utility of another sort that interests me. This is the utility of which Newman spoke as "not simply good but which tends to good, or is the instrument of good." Among the possible utilities of speculative fiction that tend toward good or are productive of good, I will concentrate on values which seem to me likely to be reinforced or even produced by the literature of science fiction and fantasy. In broad terms, these benefits may be classified as cautionary, normative, esthetic, and epistemic. One advantage of proceeding from the cautionary to the epistemic values of the literature is that we may begin with concepts that are now relatively commonplace in the critical literature and perhaps move on to develop some new insights.

Science fiction as cautionary tale has, it seems, a necessary and important role to play in our culture. The idea is now a familiar one that in exploring imagined futures, speculative science fiction sensitizes its readers to the likely consequences of the often fast moving developments of the present. Olaf Stapledon expressed such a view in his Forward to the American Edition of Last and First Man: Man seems to be entering one of the major crises of his career. His whole future, may the possibility of wishing any future at all, depends on the turn events may take in the next half-century. It is a commonplace that
he is coming into possession of new and dangerous instruments for controlling his environment and his own nature. Perhaps it is less obvious that he is also groping toward a new view of his office in the scheme of things and toward a new and racial purpose. Unfortunately, he may possibly take too long to learn what it is he really wants to do with himself. Before he can gain clear insight, he may lose himself in a vast desert of spiritual aridity, or even blunder into physical self-destruction. Nothing can save him but a new vision and a consequent new order of sanity or common sense.

Science fiction serves our culture, therefore, as a sort of early warning system. An important aspect of the cautionary tale is also to offer a reinterpretation or a restatement of moral values in imagined future cultures different from our own. To this degree, science fiction is advising us how to adjust our moral radar. Henry James meant something like this, I believe, when he wrote to H. G. Wells in praise of *A Modern Utopia*: "I hold with you that it is only by our each contributing Utopias (the cheekier the better) that anything will come, and I think there is nothing in the book truer and happier than your speaking of this struggle of the rare yearning individual toward that suggestion as one of the certain assistances of the future." Most utopias are concerned not only with the quality of life in imagined futures but also more especially with the moral values of the present.

In practice, perhaps naturally enough, this has led to a proliferation of dystopian novels which have served the times well as literary scare-crows, dramatizing the dangers of overpopulation (*Stand on Zanzibar*), the modern police state (*1984*), and misapplied technology (*Brave New World*). The list is a long and impressive one.

The utility of science fiction as an admonition implies more than imagined new means of social engineering. Future histories of one sort or another encourage us to examine our present goals and priorities not only in terms of their all too probable effects in the future but also in terms of their moral character as well. It is obvious enough that actually one is a function of the other, but the point is that the science fiction writer is very often moving beyond mere pragmatism or situation ethics. These are the values that may be called normative.
One of the reasons why science fiction has had to play an important role in helping modern man to reset his moral barometer is simply because no one else is asking how men and women are going to adapt to the future and relate to one another and to a society moving on an accelerating evolutionary spiral. This fact is to be explained partly in the history of the past two centuries during which there has been a steady attrition of Western man's moral and cultural capital. It is not only that the traditional institutions have lost their dominant influence in forming a modern ethical awareness but also there has been an apparent erosion of our practical ethic as well. The disappearance of customary and traditional guidelines for behavior has left a vacuum into which the speculative fiction has moved. The decline in the influence and authority of the traditional fiduciaries of moral standards has created a need for a new kind of seer. This in turn has produced a new orientation for our collective ethical sense—perhaps a necessary one. Science fiction offers us new guidelines for assessing our moral values. They are drawn not from past traditions but from the extrapolations of imagined futures. Consequently, we find ourselves actually reasoning backward from paradigms set out for us in the imagined worlds of the science fiction writer. In a practical sense, our culture finds itself renewing its own ethical values by drawing upon what we might call future traditions, which help remind us how to live in the present and what to live for. Examples abound in the literature from the very beginning. If we take Mary Shelley's Frankenstein as the first science fiction novel, as Brian Aldiss has suggested, we can see that very sort of ethical awareness in the origins of the genre. Wells is another case in point; indeed he may be too obviously didactic. The form seems to work best when it offers us moral and ethical values to ponder within a more mythical or speculative fictional frame. Walter M. Miller's A Canticle for Leibowitz may be cited here along with Heinlein's The Moon is a Harsh Mistress, Philip K. Dick's Do Androids Dream of Electric Sleep?, Asimov's The Gods Themselves, and stories like Ursula K. LeGuin's "Nine Lives" and Cordwainer Smith's "The Ballad of Lost C'Mell."

The heart of the issue is, after all, a moral question—a question of values. We are asking our writers of science fiction not merely for visions of better hardware but to show us imaginatively where truth and value lie for us on the road ahead.
a road which we are invited to travel vicariously. It is our moral sense that wants quickening. We need more than an inspiration for a rush to the patent office if we are to prevail as fully human in a society which thinks of itself as "future-shocked."

The implications of "ice nine" for instance are moral rather than scientific. In *Cat's Cradle*, Vonnegut is giving us a symbol, not a formula for a new weapon. The symbol makes it easier to perceive the dangers of a science that functions outside moral restraints and a decent regard for the quality or even the persistence of human life. It is in these terms, it seems to me, that we may speak of science fiction helping to shape our hopes for the future in helping to rectify our moral vision of the traditional and permanent foundations of right and wrong, or what used to be called natural law.

The importance of such normative values of science fiction and fantasy is truly utilitarian; that is, the norms are more operative than mere theoretical guidelines. The reader need only remind himself how often during the recent Watergate fiasco he was admonished with spectres out of *Brave New World* or with trailing clouds of sinister intention conjured from *1984*. We understand such references in much the same way previous generations understood the wisdom of heeding proverbs and folklore.

Matthew Arnold foresaw the inevitable rightness of such a function of literature in the future, and he spoke of it prophetically in "Literature and Science":

But how, finally are poetry and eloquence to exercise the power of relating the modern results of natural science to man's instinct for conduct, his instinct for beauty? And here again I answer that I do not know how they will exercise it, but that they can and will exercise it I am sure. I do not mean that modern philosophical poets and modern philosophical moralists are to come and relate for us in express terms the results of modern scientific research to our instinct for conduct, our instinct for beauty. But I mean that we shall find, as a matter of experience, if we know the best that has been thought and uttered in the world [that] ... they have a fortifying, and elevating, and quickening, and suggestive power capable of wonderfully helping us to relate the results of modern science to our need for conduct, our need for beauty.
There is a point, at which the normative and esthetic utilities of science fiction and fantasy literature come together, and that is the point at which science fiction and fantasy resemble myth.

The idea that science fiction is the new mythology has gained increased currency during the past decade. It is, of course, a flattering attribution, and one that writers and critics of science fiction seem eager to accept. Speaking historically, we see that writers of the new literature turned instinctively to modes of expression long out of use or thought obsolete. Although "speculative mythologists" arose in the early nineteenth century, they were working at the time with still traditional materials. In their turn, the Victorians were less interested than the Romantics in the subtleties of the earlier conventional forms that ancient myth had taken, but their various experiments at resurrection proved unsatisfying as myth, however artistic the treatment. Meanwhile, a new school of writers, unaware perhaps that it was dallying seriously with the muse, was rediscovering the ways in which myth and archetype had formerly arrested the imagination of a culture and provided it with images of a new self-understanding. The rediscovery of the mythic manner for these writers was entirely unconscious and natural; Beginning with Mary Shelley and including fantasists like R. L. Stevenson, Poe, Morris, and Wilde, it burst upon the world as full blown science fiction in the romances of H. G. Wells. Michel Dutor has put it succinctly when he said, "SF represents the normal form of mythology in our time; a form which is not only capable of revealing profoundly new themes, but also capable of integrating all the themes of the old literature."

The idea of science fiction as a new mythology, however it is conceived, is a profoundly suggestive one, even portentous. The first really clear and systematic understanding of science fiction as a new mythology I know of occurs in Eugene Zamiatin's seminal study, Herbert Wells (1922). Zamiatin calls Wells' scientific romances "urban fairy tales," arguing that the myth-making faculty of the poet has begun to take its materials from the modern city. Out of the factories, automobiles, airplanes, apartment houses and the like, the poet now fashions a new mythology for industrial men. It was a brilliant critical insight, linking present and past
esthetic theory and, in reconciling them, accounting for the formerly unacceptable power with which the new romances were gripping the imagination of its readers. Zamiatin demonstrates how the mythmaking power was seizing upon new materials to make entirely new and living myths. Already the myths were serving to give the new culture a voice by which it might speak and know itself. By the time Zamiatin wrote, the literature of science fiction had already begun to fashion symbols which would open a passage between the conscious and unconscious life of the imagination. The romantic poets, especially Shelley, would have understood at once the importance of the new visions that industrial technology was making possible for writers of a far lower magnitude of genius. It was Shelley who had warned in The Defense of Poetry that we lack the imagination to understand what we know, that we fail to integrate our experience into our inner life so that it may be fully realizable. The present need for such a literature has been restated recently by Robert Philmus in his Into the Unknown:

Though the evidence of cumulative advances in science and technology gave impetus to a belief in material progress...there was also disturbing evidence that the accelerated rate of change was far exceeding human capacities to comprehend and direct the social transformations such technology was bringing about. Man's power over his environment was increasing out of all proportion to the range of his foresight and understanding so that the unanticipated consequences of that augmented power were becoming more and more a source of bewilderment about his destiny and a cause for alienation from his future.

By the time Zamiatin was writing his study of Wells a century later, such a needed integration of values was taking place in the new science fiction. That science fiction which achieved the condition of myth helped reintegrate for us our experience of science with our imaginative life. The new literature was making it possible for readers to react sympathetically or at the level of imagined response to their new environment. For many, science fiction has become the only way in which theoretical and applied science is accessible to their emotional,
imaginative, and therefore to their moral life. In this way, science fiction has made science and its applications not only intelligible but a vital part of the experiences of the masses. Science fiction has also forewarned us of the dangers inherent in a science which is not understood or "participated" by the people. That, in fact, is almost a definition of the science fiction dystopia.

The critical idea is that through the myth-making power of science fiction, modern scientific ways of knowing have been made part of the experience of the people. His science is the means by which modern man has undertaken a redefinition of the universe in which he lives. As a result of our imagined experiences in science fiction, new ways of knowing and judging have been participated (by making them part of the emotional life of the observer), absorbed, and understood--more or less. The key here is not that science fiction imparts understanding of science theory or technology but that it makes the outlines of our culture morally intelligible.

Perhaps it is time that we turned our attention to esthetics as a possible utility of science fiction and fantasy. There is a utility the genre has in common with some other types of fiction which possess the power to evoke, stimulate, exercise and resolve certain primal emotions. The power that distinguishes science fiction and fantasy from all the other literary genres is the power of producing imagined wonder and awe. I take these two related but different emotions to be a minimal requirement of the power of the genre. Much more can and has been accomplished using these forms, but as a minimum I assume that the primary intention is to create such imagined or secondary experiences. The experience, exercise, and resolution of these elemental emotions is not only beneficial it is also necessary if we are to retain our psychological balance and mental health. In producing esthetic experiences of intensity and significance, science fiction and fantasy are well within the mainstream of literary culture as defined by Sidney, Shelley, DeQuincey, and Arnold.

The psychological benefits of such experiences are well established, as are the beneficial effects that mythic participation brings. Recently, Andrew Weil
in The Natural Mind has argued that there is an innate tendency in man to achieve altered states of consciousness and that this appetite is basic to human nature:

I have argued that every human being is born with an innate drive to experience altered states of consciousness periodically—in particular to learn how to get away from ordinary ego-centered consciousness. I have also explained my intuition that this drive is a most important factor in our evolution, both as individuals and as a species. Nonordinary experiences are vital to us because they are expressions of our unconscious minds, and the integration of conscious and unconscious experience is the key to life, health, spiritual development, and fullest use of our nervous systems.18

Although this is a splendid observation and one with which I agree, it is not entirely an original thought. We find this idea in varying contexts in the Greek philosophers, in Augustine, and in the romantic poets and critics whom I have mentioned, and heaven knows how many other writers in between and since. This is not to belittle Andrew Weil's insight but rather to reinforce it with the weight of historical precedent and the general experience of mankind. I would add to it only the codicil that we include the experience of imagined, altered states of consciousness as a response to the power of art together with other ways of achieving such states of mind. When science fiction and fantasy are successful as literature, they have the power to reshape our perceptions and to mold the imagination in new ways. Such exercises, though, will engender new capacities; and to achieve an altered state of consciousness or awareness is permanently to alter the possibilities of one's imaginative life. Although we may not be conscious of it, we are changed as surely by our imagined experiences as by our real ones. Consequently, the conditions under which we live imaginatively within ourselves also are changed. New lines of thought and even of action become possible because they have been imagined. The mind uses its myths as a projection of its own unconscious life and hence as a realization of its own potentials.
This brings us to a consideration of the last of the proposed utilities of science fiction and fantasy as tending toward good or productive of good. I have called this aspect "epistemic," taking the same Greek root as the word epistemology. I hope by this term to distinguish an essentially epiphenomenal way of knowing which involves the rational and the para-rational faculties developing new levels of awareness from old ones and evolving new potentials from the resultant dialectic. But I do not want to belabor the point because it is largely semantic anyway. I wish to place my emphasis instead on the effect of fantasy and science fiction upon the imaginative life of modern men and women beyond that which I have already suggested in considering the normative and esthetic benefits. It is an important effect because it suggests a stage in the evolution of the imagination, individual and collective, and in our understanding of its operation. Put simply, science fiction and fantasy are changing our ways of imagining, and in our time to change the representations of the collective imagination is to create the probabilities of new realities as well.  

Science fiction and fantasy expand consciousness and the imagination. They provide living images of the world or of creation not as it is or was but as it has the potential of becoming actually or under the spell of the author's vision. If we are transforming the imaginative faculty with our speculative fictions, we are in effect providing ourselves with new imagined materials and ideals from which the future will be shaped. For the first time perhaps in recorded history as we know it, men have the power to make what they can imagine. Indeed, who can doubt that the American space program, to some extent at least, represents the living proof of that. Science fiction provided the vision. We simply left it to the engineers to develop the hardware. Mankind has reached a point in its development at which it can see the possibilities of creation in what Tolkien called sub-creation. The great silly symbol of our new found power is Disneyland. Subcreation has become the blueprint of creation and the secondary is made primary. If we can ignore the commercialism, vulgarity of taste, and the low level of culture represented by Disneyland and its many imitations, we may see that the conception is
bold and revolutionary. Disney made an imagined world come to live so that the quality of illusion itself is redefined and participated not as fanciful but as real.

Any literature, art form, or medium of expression which is capable of affecting the imaginative processes of modern man is not a distraction; it is an attraction. It will teach him where and even how to focus his powers. Like star children on a real space odyssey, we are given new food for thought, food which one day may find expression in new realities independent of the imagination that conceived or reproduced them. In giving modern man the power to modify his imaginative grasp of the world, science fiction literally is helping to create the materials of future realities and shaping the form of future histories.

I conclude with a brief glance at fantasy. Although the order of its probabilities differs from science fiction, fantasy also provides the forms through which our evolving imaginations will transform the conditions under which the future is to be experienced. Fantasy offers our imaginations the possibility of alternative worlds and experiences, reminding us of options and requirements of life different from what we know now. Fantasy helps prepare us to live in worlds in which the life of the imagination is nourished rather than strangled. In these times it is possible that an imagined realization of the heart's desire will move us closer to its materialization. Some fantasy has already given us blueprints by which some of our future environments will be constructed. The original Disneyland in California was merely an entertainment center. The new Disney World in Florida is not only a middle-class Arabian Nights Bazaar, it is a community, a total environment in which employees not only work but live in a planned futuristic and fantastic setting.

The progress is halting and the grasp uncertain, but the history of the recent past suggests that science fiction has become an important force in shaping the collective dream we are having. Our visions are predications. Science fiction is making it possible for us not only to imagine earthly paradises, commercial or visionary, but also to create them, make them work, and live within them.
Hopefully, the utility of such future histories and all forms of science fiction is to prepare us imaginatively for those changes of consciousness which alter experience. As Wilfrid Sheed has said: "It isn't just real life that has changed but imagination itself, the kind of myths a generation wants and believes." He may also have added, the kind of myths a generation is using to shape its self-understanding and with that its future.
Footnotes


2. Robert Plank, "Science Fiction Shaping the Future." Both Professor Plank's and Professor Waugh's papers were prepared for the Seminar on "The Role of Science Fiction in Shaping the Future" at the 1974 Annual Convention of the Modern Language Association in New York on 28 December 1974. My remarks are based on these early draft versions of both papers.

3. David Samuelson, "Inventing the Future: Science Fiction, Future Studies and the Creative Imagination," again, an early draft of a paper prepared for the seminar noted above.


5. For one of the early explorations of this question, the reader is referred to Reginald Bretnor's *Modern Science Fiction* (New York, 1953) and especially to Isaac Asimov's essay on "Social Science Fiction." A more recent restatement and development of this point of view is to be found in Ben Bova's "The Role of Science Fiction" an editorial first appearing in *Analog* for June, 1972, and reprinted in Reginald Bretnor, *Science Fiction Today and Tomorrow* (New York, 1974). Bova's essay also makes some of the points about myth which I develop later in this paper. See below.

6. Henry James, *Henry James and H. G. Wells. A Record of Their Friendship, their Debate on the Art of Fiction, and their Quarrel*, ed. Leon Edel and Gordon N. Ray (Urbanna, Ill., 1958), p. 104. James' later disagreement with Wells over the art of fiction was not in the least a repudiation of what he says about utopias. The emphasis here is upon the esthetic values inherent in the psychology of Wells' character yearning for a better life. James' objection to Wells' later views was that the didacticism appropriate to utopian writing had gained the upper hand in all the fiction he was writing and had replaced the esthetic intentions as the primary ones.
7. Robert M. Philmus, *Into the Unknown* (Berkeley, 1970) contributes some valuable insights on the ironic potentials of the utopian and dystopian analysis of the writer's world. The record, however, is not all positive. The emphasis of Mark Hillegas' now classic study, *The Future as Nightmare* is less sanguine in its expectations; and Frank Polak, *The Image of the Future* (San Francisco, 1973) is pessimistic. Polak sees dystopias providing negative images of the future and therefore contributing to the "culture-pessimism" which he sees as the dominant note of our times (see especially pages 14-21, 196, and 280). A similar sort of culture-pessimism is argued more directly by Philip Rief, "The Loss of the Past and the Mystique of Change" in G. R. Urban and Michael Glenny, *Can We Survive Our Future* (New York, 1971). As a partial corrective to those who view dystopias as wholly negative, I direct the reader again to Philmus' analysis of the satirical tradition from which many dystopias grow and the implied benefits of the intentions of satire (*Into the Unknown*, p. 57). I would also cite Bradbury in a recent interview in *Unknown Worlds of Science Fiction* (vol. 1, January 1975, p. 78) in which he states, "I am a preventor of futures, not a predictor of them. I wrote *Farenheit 451* to prevent book burnings not to induce that future into happening, or even to say that it was inevitable."


11. Edward B. Hungerford, *Shores of Darkness* (New York, 1941) treats the whole question of literary uses of myth in the early nineteenth century. He demonstrates how the poets in particular sought to use traditional forms in new ways but concludes that their attempts ended in the failure of esoteric scholarship which attempted to "apply the product of antique culture to objects incapable of bearing the burden imposed upon them. Greek myth,
eagerly sought as the vehicle for poetic expression in an alien age, confounded those who made use of it." (p. 291.)


13. In drawing out the implications of Zamiatin's thought, I assume an operative definition of myth which is derived partly from Ernst Cassirer's idea of myth as ideational form (Language and Myth [New York, 1946], p. 8.) and partly from my own efforts at working out an understanding of how myth as expressed in literature appears to affect the imagination. The mind uses myth as a projection of its own unconscious life. Myth becomes a new extension of the mind in a way that is analogous to some forms of mathematical reasoning. In such terms, we may speak of myth operating as an organ of self-revelation whereby the mind recognizes in the forms of myth a means of its own self-realization.

14. Philmus, pp. 79-80

15. The word participated is being used here in the special sense given by Owen Barfield in Saving the Appearances (New York, n.d.), p. 40 to mean "an extra-sensory relation between man and the phenomena." The unidiomatic usage is made here as it is in Barfield to emphasize the special sense in which the word is being used.

16. Bova, Ibid, p. 9-11. In applying the criteria of the value of myth suggested by Joseph Campbell, Bova makes a strong case for interpreting science fiction as modern myth-making. My own preference is for a greater emphasis upon the esthetic and moral dimensions of SF as myth and less upon the social. The distinction, however, is largely artificial and perhaps even misleading. I believe that a living mythology serves to answer genuine cultural needs. One such need is the anxiety characteristic of recent times as described in Mildred Newman and Bernard Berkowitz, How to Be Your Own Best Friend.
OM Mark, 1974: "One of the things people need most is a feeling of living in a world they understand; that's one of the deepest appeals of religion. That's why people are so disturbed today: it's not only the violence around us but also the feeling that the world doesn't make sense. Nothing seems to hang together anymore; the old explanations don't seem to apply" (p. 46). Although myths do not offer explanations, they do appeal on other levels of awareness and offer emotional reinforcement to the idea that there is a kind of sense to life and that human experience has value.

17. It may be necessary to add a note of caution here because it is perhaps too easy to assume that all science fiction is myth ipso facto. The achievement seems to me a rare one. Olaf Stapeldon deliberately set out to write myth in <i>Last and First Man</i> and may have succeeded in inventing a modern form of tragic myth. I favor C.S. Lewis's position on the uncommonness of myth in literature. It is not really a question of artistic merit, either. Some works like <i>2001 A Space Odyssey</i> achieve the mythic state while others equally or more imaginative like <i>The Left Hand of Darkness</i> do not; and this despite the fact that I believe the latter is a better piece of writing. But the former is sublime.

18. Andrew Weil, <i>The Natural Mind</i> (Boston, 1972), p. 194. Weil's interest in his study is the drug experience and its alternatives. It seems to me though that what he says about altered states of awareness applies as well to imagined or esthetic experience as to primary experience. The only difference is the source of the experience and the mode of internalization.

19. Owen Barfield is instructive here on the possible implications of the interaction between mind and nature: "if the appearances are, as I have sought to establish correlative to human consciousness and if human consciousness does not remain unchanged but evolves, then the future of the appearances, that is of nature herself, must indeed depend on the direction which that evolution takes." (<i>Saving the Appearances</i>, p. 144.)
20. Once again, I invoke Barfield, from whose original insights so much of my own thinking on this matter has grown: "It may be objected that...it will be a long time before the imagination of man substantially alters those appearances of nature with which his figuration supplies him. But then I am taking the long view. Even so, we need not be too confident. Even if the pace of change remained the same, one who is really sensitive to (for example) the difference between the medieval collective representations and our own will be aware that, without travelling any greater distance than we have come since the fourteenth century, we could very well move forward into a chaotically empty or a fantastically hideous world. But the pace of change has not remained the same. It has accelerated and is accelerating. (Saving the Appearances, p. 146.) Obviously Barfield's expectations are less comfortably optimistic than those I have argued for in this paper. Any thinking person will agree with Barfield that the potential for future mischief is enormous, as he reveals above with such terrifying prescience. Nevertheless, Barfield is not a culture-pessimist and neither am I; nor am I clipping coupons in expectation of the millennium. I rather think that until we become as angels, the future like the past will have about as equal a mixture of the pure and the dross as we have now.

21. The phrase is Michel Butor's (Ibid, p. 228), but it is used here with an entirely different emphasis.