Zygon | *Journal of* RELIGION AND SCIENCE VOL. 10, NO. 3

ROBERT L. HEILBRONER'S VISION OF HISTORY

by Langdon Gilkey

Science in its broadest sense—what man knows about the nature around him, his social patterns, and himself—has always affected what man thinks about his role in temporal passage, that is, his view of history and of his own ultimate destiny. Two centuries ago a fledgling natural science, after several stages of gestation, spawned the theory of progress and a century ago spawned the theory of cosmic and social evolution. Both of these structured modernity's understanding of and confidence in history. But now a quite different scientific understanding of the dynamics of present social process, and so of its probable effects in the future, has led to a new view of history and of destiny, an implicit philosophy of history in the starkest contrast to its predecessor.

Science seems to be—and seeks to make us believe it is—a purely cumulative store of tentative knowledge and so as different as is conceivable from the flip-flop fads of philosophy and theology. It seems to be quite free of myth, in fact to be as antithetical to it as detergent (so I am assured) is to gray spots on sheets, and so to be quite inde-

Langdon Gilkey, professor of theology at the University of Chicago, presented this paper at the Institute on Religion in an Age of Science symposium, "The Human Prospect: Heilbroner's Challenge to Religion and Science," Washington, D.C., October 23–24, 1974.

[*Zygon*, vol. 10, no. 3 (September 1975).]

pendent of any more ultimate vision of what things are like and where they are going. This, one may say, might be true enough of the intramural hypotheses or conclusions of inquiry, though Thomas Kuhn may question even that; here we are in the sanitized world of the proximate, the relative, and the testable. However, the history of science, with this its present example, shows that this limited horizon is for the questioning mind of the scientist, if not for his official discipline, far too cramped an intellectual space. Because of what he knows, because of its possibilities for his use, and because of its implications for his life, his world, and his future, the scientist's mind is driven beyond the merely empirical data to raise questions of destiny and freedom and of ultimate meaning—and so, if not "scientifically," still qua scientist, he utters philosophies of history. Such was, of course, the theory of progress, an implication of the creative possibilities for the future of a culture dominated by science and its child, technology; such in our day is also the new vision represented by Robert L. Heilbroner's *An Inquiry into the Human Prospect.*

Not only, then, does science imply and bring forth such visions; when one looks at its views of history and of destiny, one discovers an even more violent swing from optimism to pessimism, from Francis Bacon, Herbert Spencer, and Julian Huxley to the present somber tones of Donnella H. Meadows and Heilbroner. As is obvious, the purpose in the following remarks on Heilbroner's extraordinary book is to relate that piece not to the data or even to their probabilities (for in that field I am not at all competent) but to the questions of the structure and prospects of history, to the philosophy and theology of history, and to see what it seems to mean in that context. For here surely scientific thinking is treading, as it did in the eighteenth and nineteenth centuries when it fathered the theory of historical development, closely—and we shall see how very closely, like some powerful but baffled predator—on the territorial preserves usually frequented only by those endangered if not quite extinct species: speculative philosophy and theology of history.

The Eclipse of the Enlightenment

After reading the views of our destiny and the future represented by an older generation of scientists—Julian Huxley, G. G. Simpson, Theodosius Dobzhansky—and even my present colleague, Victor Ferkiss, Heilbroner's little book, if it is representative, signals a most important change in the way the scientific community looks at itself, our wider culture, and the future.

This view is as new as it is radically different. Appearing only in the last half-decade, it is the result in general terms of the sudden realiza-

tion among scientists (and this speaks well for their honesty) that modern science and technology (or, better, their misuse) have depleted and so almost emptied our natural environment of its natural resources; then in turn this realization about resources is combined with the insights of social science and social theory about human behavior to provide for us a projective picture of what the exploding ecological crisis means socially and politically for the future. Many scientists have outlined the nature of the impending crisis in the earth's resources; few have seen as clearly as Heilbroner the probable social effects of that crisis and thus essayed realistically to assess the total character of our future.

In Heilbroner's book the proximate future (two or three generations) is not pictured as a new utopian day filled with technical wonders; nor is it viewed as in Herman Kahn's projection as a steady continuation of present sensate, liberal, technological, and productive industrial (i.e., American!) culture. Rather, its newness wears a different hue: It is a day grim, bleak, and filled with suffering, a day of darkness and not of light, of despair and not of hope. Heilbroner argues that the future will only continue and not dispel the travail and suffering of the past—in itself enough of a gloomy note to a scientific community saturated with confidence in progress. Even more, the future, he says, will multiply this suffering. The hard-won and flickering values of our present—affluence and security, freedom of ideas and self-determination of life-style, and (one may add) hope of a better future—will be threatened and in all probability extinguished. Thus our movement into the future will be not at all an ascent but a descent, a descent into the bleak cave of bare and unrelieved survival, a survival characterized by overcrowding, material want, rigidly determining systems of life, and authoritarian government. And, what makes it so different from all other dark ages, there will be no prospect in history or in time of its alleviation. If supernatural religion and theology were for many in modernity made irrelevant by the brightness of yesterday's scientific view of the possibilities of the future, they are seemingly now made almost irresistible (if also almost incredible) by the bleakness of today's scientific understanding and its own jaded prospect for our earthly future.

Not only, then, does this newest of scientific views of the future signal a sharp end to the theory of historical progress ending in social utopia; even more, if it is accurate, it signals an end to the Enlightenment culture that fathered that progressivist theory. Seldom has the end of an entire cultural or historical epoch been so dramatically foretold. The era, Heilbroner says, of emphasis on the conquest of nature and the comforts and security that conquest brings, of the

celebration of technological and industrial expansion, and of the desire for more and more production—Francis Bacon's whole world of confident and proliferating technology—this must now be all over. Correspondingly, the era of the domination of science and its modes of inquiry and of truth, of intellectual freedom, love of heresy, and the thrill at novel ideas, is now too dangerous to be afforded. The era of individuality of life-style, privacy of life and of judgment, individual participation in public decisions—all this will be impossible in the probably authoritarian future that faces us. Above all, the era of confidence in man and in his future earthly blessedness, the sense that happiness here *is* possible, that human creativity leads to human fulfillment, and that freedom is the key to human self-realization, is at an end. All of these beliefs in man and his vast potentialities in history through knowledge and the control it brings that characterize the "modernity" created by the Enlightenment have been proved to the hilt not to have established and secured human life on earth—as had been promised. Quite to the contrary, the hard facts and their implications (not, note, theological dogmas and *their* implications) tell us that these creative human powers encouraged by scientific modernity threaten human existence mortally. Thus, his argument runs, will humanity be driven inexorably to the denial of this very set of notions and goals if humanity is to be saved. Whether or not Heilbroner realizes the transcendent meaning of his piece, this, it seems to me, is it: The dream of modern humanists—and many theologians, too —that creative invention and the waxing power to manipulate, to transform, and to produce will enrich, secure, and bless future generations has evaporated, having like Frankenstein begun to destroy the human being who created and lived by that dream. For, says Heilbroner, the only chance our race has to survive is precisely to abandon this dream and to reverse this process of scientific, technological, and industrial development and to create another entire cultural gestalt, as different from the goals and hopes of the Enlightenment as is conceivable.

This impending demise, moreover, of the technological civilization and the Enlightenment culture which it fathered has, for Heilbroner, ironically been a case not of murder but of suicide, of *self*-destruction. The evil genies at work here have not at all been either holdovers from an alien medievalism or aspects of new irrationalism or religionism long feared by the intellectual priests of modernity. Rather, the forces that have created these fatal problems of Enlightenment culture are precisely the forces creative of and created by the Enlightenment, intrinsic to it and definitive of its essence, namely, science, technology, industrialism, and their wider cultural milieu that

give precisely these elements overriding (to Heilbroner, undue) prominence in its assumptions, its values, and its goals. According to this dialectical irony, emblazoned, so to speak, in an entire epoch's history, human creativity as defined by modernity has by its own self-destructive logic led, and will in the future lead, not to more creativity but to the demise of creativity, not to further freedom but to its loss in authority, not to further privacy but to a new corporateness, not to further affluence but to material want. In Heilbroner's vision, science here should understand itself as the ill-fated instrument not only of its own self-destruction but of every cultural form it values and even as a threat to life itself—as, surely, it once saw itself in the precisely opposite role. Thus Heilbroner agrees with my initial remarks: The age of progress through science, technology, and industrial developments, of the expectation of an open and promising future, is gone, and a new Iron Age is in the making. And this is, he feels, universally felt: on the level of the feelings on the part of all of us, and clearly in reflection on the part of those who know. We all, he says, "share an awareness of an oppressive anticipation of the future."

The causes of the present anxiety concerning the future that Heilbroner assumes, this unthematized certainty of fundamental breakdown, are, for Heilbroner, diverse but unfortunately utterly implacable and unremovable. Beginning with the more intangible, spiritual ones, he cites a new and helpless feeling of the loss of control over our major problems; neither brains, courage, nor money seems to help as major problems become worse rather than better, and those leaders who deal with them actively seem no better than those who do nothing. There is, further, a sense that the quality of life—of the natural environment, of our cities, our towns, of the way we work, commune with one another, and enjoy life—has vastly deteriorated and threatens to get worse. The changes in our natural and social worlds that we once saw as progress, we now realize, lead to desecration, mediocrity, and the slow death of all that lives. Finally, there is what he calls a "spiritual malaise" permeating deeply our cultural life. In our generation, general affluence has at last spread to much of the population, and yet, he notes, discontent is as rife as before. Our present spiritual situation, dominated by a materialistic, goods-centered spirituality, is sadly awry: Men and women have discovered empirically, so to speak, that they are not satisfied with a glut of goods. Our affluent cultural life, built largely on the proposition that they would be so satisfied, has now proved to the hilt the ancient wisdom about the insufficiency of bread alone. He might, I think, have added to this list of "subjective" conditions of massive change the feelings of unrest, disaffection, alienation, and anger at the dominant

scientific, technical, libertarian, and capitalist culture felt throughout the Third World, by our minority groups, and by much of our youth—not to mention the radically anti-Enlightenment spirituality latent in the present widespread concern for parapsychology, Eastern religions, and the occult.

Balancing this inner disintegration of the technical, industrial culture are objective developments—"external challenges," he calls them—which in concert will, he feels, surely destroy the liberal, dynamic forms of our present culture and, if the race is lucky enough to survive at all, bring in a new culture. The first of these objective challenges is the population problem created by medical science and exacerbated by the science of agronomy, which doubles the population of the earth's poorer regions every quarter of a century, threatening, unless checked by mass starvation, to place here forty billion persons (as opposed to the present 3.5) in one hundred years. Such a growth in population seems to require an almost infinite agricultural and industrial expansion if the most tragic levels of starvation are to be averted. The social situation, Heilbroner notes, of such a crowded, unemployed, starving, and hopeless mass of people jammed into immense urban centers is unimaginable; the only certainty is either massive unrest or iron discipline. The most probable political result, Heilbroner feels, will be revolutionary governments in the poorer, more crowded lands, possibly using nuclear weapons to force the rich nations into a redistribution of the world's goods. Or, as I see it, the greater danger is that the powerful of the earth—now unified by détente—will see all this coming, will assert control over the underdeveloped world both to seize the earth's remaining resources and to prevent precisely this revolutionary redistributive action, and thus, at the expense of a tight, universal tyranny both at home and abroad, will seek to retain for a brief moment or two of time their present levels of affluence. Let us note that in either case—the one to rob the present rich, the other to defend the rich against the poor; the one to enact, however crudely, a more just redistribution of the world's diminishing goods, the other to retain and enforce present inequalities—a situation of almost total and universal authority seems inevitable.

The second objective development—in collision course with the first—leads inevitably in the same social direction, namely, toward authority. It is (1) the depletion of the earth's resources, which seems certain surprisingly soon to demand a slowdown and then a halt to industrial expansion. In league with that, (2) there is as well the danger of overreaching the thermal limit of the atmosphere, which long before the extinction limit is reached in a century and a half

(three or four generations) will also require a slowdown and a halt to industrial growth. The result—as inexorable to Heilbroner as the advent of winter (its coming is, he says in scriptural cadence, certain, but its exact time is unknown)—is "the inescapable need to limit industrial growth"; "every sign points in the same direction: industrial growth must surely slacken and likely come to a halt, in all probability long before the climactic danger zone is reached." The only alternative to such industrial contraction is, he believes, in the end death. The dilemma is that the survival both of the race itself and of the values by which we now live seems to be based on precisely that same mortally dangerous expanding economy. The expansion on which our existence as a proliferating race depends is in turn precisely that which threatens our existence as a race.

Because of this inexorable need to control and then prevent industrial expansion, a vast increase in the extension of control by government and thus in the authority of government will be unavoidable. There are three reasons for this:

1. The expansion of technology in and of itself entails a growth in systematic and thus total controls. In turn, the control of technological and industrial expansion, halting its free and unfettered development, limiting its rate of growth, and a fortiori effecting its diminution or reduction will require even more control over every form of research and technological development. Thus increased and finally total scientific, economic, and social planning carried on increasingly under authoritarian governments is an unavoidable part of an increasingly restricted future.

2. Halting the rates of growth, not to mention lowering all standards of living, will have immediate social repercussions, domestic and international. It has been the expansion of production that has kept order and peace in our contemporary world—among the unequal economic classes of capitalist countries, among the unequal political classes of socialist countries, and between the have and the have-not nations of the world. When standards of living go down, or even threaten to do so, Heilbroner argues, these inequalities will become suddenly intolerable, and we will be threatened by lethal social conflict. Authoritarian governments will be needed to control this universal unrest and then to implement whatever difficult political and social options face us in this situation of scarcity, anxiety, jealousy, and unrest.

3. Finally, as I noted, authoritarian governments will be called for whether people seek to redistribute food more evenly among nations, whether they seek to preserve and ration the world's rapidly decreasing supplies, or whether (heaven help us) those with power seek to

retain with force the present radical inequalities between classes and nations.

In Heilbroner's view, this picture of crowding, scarcity, and iron authority is the future to which we seem fated. The objective dynamics of science, technology and industrialism, and the expanding population they seem inexorably to produce appear to "fate" us, whatever we are or do, to descend into this darkness of want, scarcity, and authority. In this new world our customary liberties will, says Heilbroner ruefully, seem as irrelevant and impractical as the "douceurs" of the pampered aristocracy of the *ancien régime* seem to us! No wonder Heilbroner is reminded of Prometheus, whose innocent daring and creativity led inexorably to his final enchainment on the rocks.

Despite the language of certainty that he uses about the appearance and effect of these "challenges," and so about the demise of our experimental, industrial, and technical culture, Heilbroner is not to be faulted for being a total fatalist or determinist in his view of history. He recognizes throughout his "prophecy" that although there are unavoidable conditions (or "challenges") for each age—and thus is his forecast grim—these conditions arising objectively out of trends in nature and society do not determine with rigid necessity what actually occurs or will occur. Rather, the events that in fact transpire are also dependent on the human responses to these challenges, "what in fact men *do*," as John Herman Randall puts it, or, as the historian Gordon Leff insists, they depend on the human response to a given natural or social condition. In other words, for Heilbroner as for Tillich, past and future alike reflect a polarity of conditions and response, of destiny and of freedom. Moreover, it is clear to him that these conditions and problems—our future given "destiny"—are themselves not predetermined necessities of natural or social "law" but rather the results of the past use, or misuse, of our human "freedom," configurations, that is, of human response; or, as he puts it, they are social problems originating in patterns of human behavior and so potentially capable of transformation.

Nevertheless, despite his understanding of the ever-present reality of the freedom inherent in response and in policy, he has a very deep sense of the limitations of freedom in history—a sense the scientific optimists of a generation earlier did not share. First of all, the freedom of response, he argues, is radically limited by the conditions and possibilities given to it. In this future, if we are to survive, we must choose to control technology and industry, and we must choose order rather than continual unrest. If, moreover, we are to have a just world, we must choose a forced redistribution; if, on the contrary, we

are to have for ourselves an affluent world, we must choose to seize the world's diminishing resources and to defend our affluence in a starving world. Like people on a raft, we cannot but ration—maintain an iron discipline and a corporate spirituality. The fascinating point made here is that in all of these areas the objective situation forces responsive, free humans, whatever the virtue or the wisdom of the responders, to choose authoritarian government, frugality of life-style, and corporate social existence. Despite the real choices that will remain, therefore, we seem to him nonetheless "fated" to accept, even to encourage, stronger and stronger patterns of social authority and vast and fundamental changes in styles of life. This sense of an ineluctable fate in which our freedom must operate is, I take it, one ground of Heilbroner's gloom and the explanation for much of the objective force of his argument.

Finally, with regard to the limitations of freedom in history, Heilbroner recognizes that a just and relatively painless answer to these challenges—namely, a voluntary and so political reform of our social institutions that would provide a gradually increasing control and so make possible the necessary but painful redistribution—is more than can be expected of "freedom" in history. The similarity of his picture of the future and Hobbes's picture of the past and the similarities of their two resolutions are striking. In each a chaotic human situation, unbearable and destructive, is to be resolved only by the imposition of an impregnable authority over everyone. But Heilbroner is less optimistic about man than was Hobbes, for he does not believe that such a radically self-limiting "social contract" is a historical possibility even if its future alternative, like Hobbes's past alternative, is a life that is nasty, brutish, and short. Such an act of social creativity, namely, the voluntary submission to authority in order to reduce living standards and redistribute goods—an act demanding incredible foresight, rare self-control and self-sacrifice, and a transcendent fellow feeling—can, he says, hardly be conceived as a possible political action. What politician, asks Heilbroner, who promised such a voluntary reduction in the standards of living of his people would be able to survive, be he capitalist or socialist, leader of an undeveloped or an affluent country? Thus, concludes Heilbroner, the new future will be brought in by external forces and not by social contract, "by changes forced upon us by external events rather than by conscious choice, by catastrophes rather than by calculations. . . . Nature will provide the checks, if foresight and morality do not." Wars, preemptive seizure of raw materials, revolutions, crises in resources, mass starvation, etc., will do what politics, as the communal instrument of free response, cannot do. The new unfree world will not be willed by freedom but created

by fate—even though a wise freedom, were it really free, would have willed it. Theology has rarely, if ever, even in the hands of Niebuhr, nurtured more succulent paradoxes!

Interestingly, whereas the older generation of scientists looked forward to a day when, through technology, free choice would increase in scope and influence throughout the range of historical existence—it could, they said, manipulate history in almost any direction it wished and even take charge of social and biological evolution—the present generation, conscious of the ineradicable limits of freedom in concrete history, finds the area of choices in the future strictly limited both by objective conditions or "destiny" and by the intellectual and moral weaknesses inherent in a self-concerned humanity. The dream that free will can create its own kind of future through its creative powers has here entirely faded. In this view human freedom will be constrained in the future by a self-generated fate that will, whether it will or not, force freedom to contract itself and finally to abdicate and to submit to authority. Certainly soberly realistic about the way we are, about the real limits of our freedom in history, and about the self-destructive character of autonomous freedom, Heilbroner's analysis, whether he knows or likes it or not, comes pretty close here to the orthodox theological interpretation of man's situation, if not of ultimate reality. He does not say it, but he portrays an estranged and warped freedom, one whose unlimited use, guided by its heedless concupiscence, in the end destroys itself and its world. Unintentionally, he has provided an empirical documentation of the symbol of a freedom in self-destructive bondage, of the taint of original sin.

The New Dark Ages

Our theme that Heilbroner's future—and that of all who have taken the ecological crisis with seriousness—represents the end not only of the progressivist vision of the Enlightenment but of the Enlightenment as a total system of cultural values, priorities, beliefs, and hopes is confirmed when he portrays the kind of world which alone, he believes, can survive in this future. It is a civilization and a culture at every point precisely opposite that envisioned by developing modernity—and thus a world which, as he admits, the intellectual children of modernity will find utterly abhorrent. This will first of all be a static society because expansion on every front, the incredible dynamism of modern civilization toward change and the new, has brought man to this pass, and only rigid control and thus utter stability can prevent ruin. As a static society, it will, moreover, be traditional. Constrained by rigid patterns of behavior and presumably authoritarian myths which function to confirm these patterns, it will

shun the new, the unorthodox, the innovative as a threat to its stability and as a renewed sign of the feared expansion. One can surely surmise that only that sort of strong theocracy or heteronomy despised by the Enlightenment could so enforce the norms and symbols of stability and of authority. It will, further, be rigidly frugal and thus probably ascetic, not "pragmatically" for a better tomorrow as in early capitalism but because, as in medieval or Eastern asceticism, all inner yearning for "more" will quickly spell personal and social doom. Finally, because of energy shortages, life will cease to expand into larger and larger scale units, whether of urban complexes, offices, or factories; small units, simple machinery, and reduced communities will be necessary.

In sum, we will move back beyond the teeming Hellenic, medieval, and early Renaissance towns into an almost prehistoric village situation with its crafts, its elders, its traditions, its holy man, and its immense mythic sanctions. Having abjured of necessity the conquest of the outward world, this postindustrial society will return to the inward: More varied and higher inner states of consciousness will, Heilbroner says, replace higher levels of material affluence and of external power as the goals of life. Once again, therefore, as before critical reflection and science appeared prominently in history, will myth, ritual, and spiritual techniques become dominant (and probably an authoritarian clergy to enforce them) over scientific hypothesis, laboratory process, innovative techniques, and the freedom to question and to invent. As in a tribe or a prehistoric polis, corporate values and aims will take clear precedence over individual ones; and individual conscience, intelligence, and freedom of action will be smothered. Thus almost everything the Enlightenment abhorred will be valued; almost everything the Enlightenment valued—and believed in—will be shunned as lethal to human good. As Heilbroner significantly remarks, such "primitive" societies have lasted quietly for millennia because they lacked any dynamic, expansive thrust, any way of developing new and improved technologies, any mechanism of political protest, any mode of spiritual or moral transcendence over tradition. Here both the freedom and the individual creativity out of which the new and so the better arise are banished in order that survival be possible—surely a non sequitur to a modernity that assumed that the freedom to invent and to develop the new was the very secret of human survival and thus, in fact, precisely what was meant by "better." In this strange inversion of almost everything, obviously society so pictured has stepped back quite out of the dynamic of history or retreated from it. Human creativity is now seen to be essentially so destructive that it must be locked in the chains of a

traditional society if man is to continue to be at all. In truth, Prometheus has by his own daring brought upon himself his enchainment on the rocks.

While Scientists Are Forced to Join Philosophers of History . . .

Several remarks should be made about this new vision of history and the future generated out of present scientific knowledge.

First of all, as I have tried through this example to show, a total vision of the future and so of history inescapably arises from the character of our human immersion in history. For, as previous scientists and now Heilbroner illustrate, despite their desire to escape "philosophical" and especially "theological" conclusions, even the most "empirical" and deliberately unphilosophical of humans are immersed in history in such a way that inexorably, at the same time, they transcend it—with their minds as well as with their deeds. That is to say, they must raise questions about the course of events in which they are immersed, and so they must formulate views, coherent or incoherent, empirical or nonempirical, about that course of events. They must ask, as Heilbroner must, What is going on in the historical process in which I find myself? Where are we going? Is there hope for us in history? and so, finally, What is the general shape, direction, and outcome of historical process as it interacts with human response? If they do not ask these questions, as a positivist generation did not, it is because preceding scientists did ask them and their positivist children are now living on their inheritance. Now, in a new world, Heilbroner must reask and answer them. This list of unavoidable questions forms the stuff of which philosophies and theologies of history are made. Thus, despite Heilbroner's own reiterated (and ineffective) distaste for philosophical accounts of human nature and the strictures of his fellow empiricists, his own example—and that of his Enlightenment and evolutionist progenitors—shows that the search for forms of conceptuality, for philosophical and theological notions and even myths with which to thematize these ultimate issues, is inescapable for humans. To be transcendent enough over history to seek to understand it through the social sciences and to manipulate it through technology and informed policy, enough, that is, to deal with it politically, and enough to organize—with the help of even the most pragmatic theory—useful social structures, necessitates "historical consciousness." Historical consciousness in turn entails a theory about history in its widest extent, that is, a view of objective conditions and their relation to freedom, of the patterns of historical process, and, as well, a vision of future destiny. Such historical consciousness, therefore,

cannot avoid fundamental and thus speculative social theory, philosophy of history, mythical speech, and global beliefs about the whole. Whatever they say they do and wish to do, the scientific community in every age itself illustrates that human "historicity" involves inevitably the articulation of comprehensible and comprehensive visions of the whole of history, of its dynamic factors and its probable goals and meanings.

Second, as I have also indicated, the form of the social theory, the philosophy of history, and the vision of destiny to which Heilbroner is inescapably led by his understanding of present "facts" is in direct opposition up and down the line to that to which preceding generations of modern scientists were led. Not only has their view of progress vanished; even more, their essential values, that is, their ranking of the social and moral priorities of "civilization," have been fundamentally overturned. Gone are the Enlightenment values of disenchantment, skepticism, free inquiry, innovation, and experiment leading to the expansion of useful control and production; predominant again will be the values of stability, conformity, belief, acquiescence to authority and to tradition, and the heteronomous sanctions of a mythic horizon. Let us note in this connection how, contrary to humanist assumptions, moral values and priorities are not self-sufficient. Rather, they are dependent on the more fundamental conceptuality of a vision of history, of process as a whole, and of the relation of human beings to the character of that process. Within one vision of history the liberal values of the Enlightenment seem utterly self-evident. With a radical shift in the understanding of history and its prospects, these same values become liabilities, harbingers of doom rather than of self-realization, and their precise opposites become "good" and so head the list of social priorities.

Most surprising of all, we are summoned to this metanoia, so directly antithetical to modern sensibility, not in the name of the forgotten and thus angry gods but in the name of earthly survival—the one lingering priority of earthy and naturalistic modernity! Here, therefore, this understanding of history takes on its peculiar irony and fascination. What Heilbroner is evidently saying (and, surely, the apparent facts bear him out) is that it is precisely human creativity—the intelligence, the inventiveness, the practical genius, the infinite curiosity, and the freedom to exercise that commitment and creative genius in inquiry and technology—that has led us to this doom. For out of these have come increasing knowledge, technology, expanding production, and the changing, reshaping, and use of our world and of ourselves. All of this, which to an earlier generation was the recipe of survival and progress, turns out in the end not at all to be aids, even

less necessities, for survival—perhaps that most beloved dogma of all—but precisely lethal threats to survival. Technological reason and the technological expertise it produces—the sacred instruments of modern culture—are here seen to possess built-in self-destructive elements that lead to their own inevitable breakdown and abdication—if survival is to be maintained. Correspondingly, those "primitive" mythic, inward, religious, unscientific, untechnical, and thus hopelessly impractical cultures, which were studied and scorned by modernity—those in which autonomy, creativity, and thus historicity had not been discovered, prized, or developed—are now seen as having the best chance of "making it" in history. The relation of human creativity to historical process is here precisely reversed: Creativity is seen as ultimately alienated or estranged from social process and so from itself since it leads in the end to self-destruction and not to security and self-realization. Strangely, critical and inventive intelligence and "the reality principle"—again as in the Prometheus myth but not in Freud—are here viewed as violently opposed. *Homo faber* apparently cannot survive in history! *Homo mythicus* can and will. To be worldly is to move all too soon from this world to the next; to be otherworldly is to adapt successfully to the world. How strange an end to a scientific and secular culture when these parodoxes—not to say heresies—are uttered by one of its most perceptive antireligious savants!

. . . There Are Problems with Fatalist Myths

Put this way, this historical vision of history runs counter not only to the scientific Enlightenment—though this is clearly its main dialectical opposite—but also to the magnificent transcendence that Hellenism achieved over its own mythic and nonreflective forebears and to the biblical sense of human historicity and dynamic process against the surrounding nature and tribal religions. Only the Greek tragic sense of history (where creative daring ends in chains or where a creative Socrates dies at the hands of the polis) and the biblical understanding that the covenant people may culminate in exile (or on Calvary) reflect in their own way this same sense of fundamental alienation of creativity from the iron laws of history. And let us recall that this Promethean (for that is, of course, the real message of that "myth"), Faustian, and Frankensteinian vision is in Heilbroner's hands not at all a "myth" grounded only in sensitive insight into history's realistic structures. Rather, for him it reflects the verifiable structure of actual history's developments and trends, uncovered by physical and social science, and so emblazoned for all to see in the data of direct experience. This is hardly for him a myth about history; on the contrary, for

him history itself incarnates and so manifests to empirical inquiry the lineaments of this tragic "myth." For the destruction, abdication, and final removal of human creativity and historicity are, for Heilbroner, not events within a reflective system or within a dramatic performance but events that characterize the structure of actual future time.

A word should be said about Heilbroner's use of myth. He urges that the Prometheus myth extolling (?) men's daring and creativity has been basic as an ideal for modern culture but now is slightly dangerous as a model for us. It is that very creativity that has gotten us into all this trouble. Rather, he suggests that we look at the figure of Atlas as representative of those virtues in ourselves which are now so needed: fidelity, dependability, patience, selflessness, and great endurance.

Here, clearly, Heilbroner understands myth as merely a moral ideal or example, an imaginative projection of those powers and virtues of man which we admire or should admire. This is a typically naturalistic and humanistic view of myth as concerned only with human capacities and moral inspiration in an irrelevant cosmos. Traditional myth, however, had no such exclusively humanistic and anthropocentric moral reference. Its purpose was not primarily moral inspiration—though that was part of its role—but truth about the nature of things and so about the human role in the cosmic order and in history. Myth, to be sure, spoke in terms of a story, and it personified all its actors. But the point of the story or drama was to illuminate the underlying or divine structure of things and the human possibilities and obligations within that structure. Myth was a vehicle of religious and even ontological understanding, not of moral self-improvement.

I am surprised at Heilbroner's facile rejection of the Promethean myth as "irrelevant" today. As I have shown, Heilbroner's whole account validates in a new way the truth of the Promethean myth and calls for a reevaluation of that truth. In modern times we have all taken for granted that Prometheus (representing us) legitimately and innocently challenged the gods. His daring and creativity, representative of our own, seemed quite unambiguous and wholly benevolent. Zeus's reaction and Prometheus's tragic end were thus seen as arbitrary and unjust. The punishment meted out to Prometheus seemed the result of a petty tyrant's "jealousy" of another creative figure in the same cosmos—a jealousy that was for us as inexcusable as a parent's jealousy of a creative child (of which it was, needless to say, merely the projection). The only self-understanding the myth offered to us was that modern autonomous culture was justified and the old religious order tyrannical—and all jealous fathers are petty, vindictive

weaklings. Zeus here represented nothing real within the objective nature of things, and especially nothing real in our modern world —except perhaps the subjective realities involved in all of those projections that had become the gods of religion.

Heilbroner in his own argument, however, suggests that the Prometheus myth is in a strange way perfectly true about the real, objective world in which human creativity functions. Thus he seems to propose, at least implicitly, an entirely different interpretation of the myth. The titanic creativity of mankind, he tells us, has, by the logic of its own expansive dynamic in relation to the implacable character of the finite cosmos, inexorably resulted in condemning men and women to future chains. This "fate" is no chance accident, no arbitrary punishment or condemnation, no petty action of a projected father figure. Rather, the objective nature of our world is such that the scientific, technological, and industrial experiment, by its own intrinsic dynamic, ends in tragedy, and thus we had better accustom ourselves to that grim fact and be quiet and patient, knowing now our fate.

In this utterly new self-understanding of our possibilities in the world, the role and character of Zeus—representing now the implacable, objective order of things—totally change. Instead of the symbol of our own neurotic subjectivity, Zeus is now an objective symbol referent to the way external reality has revealed itself to be in relation to us. Thus Zeus stands for a reality against which, as the Greeks understood but we did not, no legitimate or meaningful complaint can be lodged. Correspondingly, Prometheus's punishment is no longer the accidental and unjust result of a threatened tyrant's whim but the inevitable consequence of his transgression of grim, objective limits. I find no point at which Heilbroner's argument disputes the Promethean interpretation of human history or its tragic understanding of the link between creativity and self-destruction.

Suddenly, therefore, we have confronted in historical process a reality that is not only mysterious but in many respects terrifying, counter to our wishes and hopes, and seemingly threatening to crush us because of our creativity. History appears here to be more like fate than like the promised malleable destiny it was for our scientific and inventive forefathers. Such cold and even demonic mystery at the heart of ourselves and of historical reality our science never foretold, or could foretell, and we wonder anew about how to comprehend the mystery in which we live and which we can never fully conquer because in the end that mystery has to do also with the ambiguity of even our creativity. This vision may lead us to greater self-understanding, both of our own ambiguity and of the genuine enigma that surrounds

us, and to greater appreciation for levels of understanding and of speech which in our empiricist and positivist culture we have scorned—levels which have sought to tell us not only of our own attributes and ideals but also of the nature of the objective mystery in which we exist and toward which we move in the passage of time.

This vision of our future to me seems finally to vindicate the Christian tendency to see in Prometheus in part the figure of Lucifer and of a rebellious Adam—he who in being creative and daring also grasped power, rule, and reward to himself and his own and thus destroyed himself. In this symbolic account it is not the creativity that is at fault, that is, the transgression of limits set by old orders of things—for these acts of creativity are of the essence of the human which is good. It is, rather, the pride, the greed, and the lust for gain and security which accompany that creativity in historical life that lead to the enchainment on the rocks, the descent into the cave of bare survival and of authority. And, surely, this vision is the more accurate portrayal of our plight. Our creativity has not in itself caused our dilemma; it is, rather, our insatiable gluttony in our use of the earth, our unwillingness to share, our resistance to equitable distribution, our frantic use of power to grasp and to maintain security that will in the end destroy us if we are destroyed. But if the "fault" is a taint in our creativity, not the creativity itself—and here lies the difference in the symbolic accounts—then perhaps the punishment has a different character, the perpetuator of the punishment a different role, and the issue a different possibility.

Inevitably, therefore—and utterly surprisingly—the question of questions with regard to human destiny arises for us, too, and from science! Is "Zeus" providential creation and salvation as well as iron necessity and thus inexorable punishment?—an ancient Greek and even more a biblical question now made vividly relevant as we look ahead through the eyes of science. Two things can be said, more of proclamation than of theological analysis but nonetheless important.

First, in a biblical world there is and there can be no fate—and here it is an apparently fated future compounded of a finite nature, technical creativity, and their implacable social consequences that we face. But contingency is the name of history. There are continuities in history, and developments in technology and population growth and their relation to natural resources do have their consequences. Also, pride and greed, injustice and domination, do have their historical effects, and these must be undergone; and new moments in time do portend new and terrible temptations to unwisdom and sin as well as new opportunities for creativity. Nevertheless, the future is open. No "force" or dynamic factor in history operates other than through

human beings and through their common behavior—and thus contingency and freedom enter into each interstice of historical life. Freedom, therefore, remains, and it is a freedom to fall as well as to create, in technology, in economic structures, and in politics. Thus no sequence of determined events, benevolent or nightmarish, is fated for us in the unknown that is to come. This nightmare itself illustrates this: It was unguessed less than a decade ago, and so it is quite unexpected. Yesterday's vision did not see it; perhaps tomorrow's will (all things being contingent) see something quite different. In itself this nightmare is based only on what we can now see in technical possibilities, in economic and political forms, in the general dynamic of historical process itself. This is not to say that Heilbroner's future is not possible, a resultant we must ponder and prepare for; it is to say that, like Kahn's "benevolent future," it is not a certainty, and thus we should not allow it to make us despair. A new constellation of all the significant factors in historical process is always possible. No determined future is the truth.

Second, both our experience of history and the biblical witness assure us that, even within the most tragic situation of captivity, a new covenant in history is promised, that in the darkest hour new birth and new life in human affairs arise, that damnation, either ultimate or historical (and we have gazed here at the latter), is never the final divine word, but that the providence of God offers continually new possibilities in each historical situation and ultimate restoration. Thus there is meaning in each moment of time, and there is hope for even this future. I cannot see how a technological culture can view itself honestly and not seek to understand itself and its future in the light of this or some similar word: as creative and yet as demonic, as threatened with self-destruction and yet as always upheld by the divine power and the divine promise. Such faith in a nonfated future, in the continuity of open possibility, and in the divine completion of our every abortive creation is now more necessary than ever.

The Role of Religion and Theology

A final comment: I have referred a good deal to the role of religion in the future Heilbroner pictures, though this has not been my main intent. Certainly, that role will be essential if not constitutive. Religion, and specifically any religion which has a vision of man's role and destiny in history, provides the grounds, as we have seen, for moral values and moral commitments, and plenty of both will be needed if this grim picture is going to be actual. Also, as I noted, in the future society that Heilbroner pictures, religion is an important, valued basis for the order and meaning of that culture's life. Here in actuality religion is the "substance" of culture rather than an ineffective and

dispensable holdover from irrational times—as it was for the Enlightenment, for most of learned modernity, and as it remains for Heilbroner the man. Needless to say, a theologian welcomes this new understanding of the creative social role of religion, though not the picture that compels us to it. (It is a temptation for us to rejoice in grim portents because they help the sale of religion—as the analyst gets a professional shot in the arm with every reminder of how neurotic the world really is!) In any case, it is an assumption of almost every theologian that humans are "religious" at their deepest level and, therefore, that none of their important human characteristics can be understood without that dimension. Thus they are glad to find others agreeing with them, however unwillingly, on this diagnosis of our humanity.

Nevertheless, the peculiar role of the theologian is somewhat different, and this role I have here sought to embody without doing violence to Heilbroner's text. The theologian is not only concerned that religion be socially useful, necessary, or even central and thus that it be approved, encouraged, and made more prominent; he is ultimately concerned to show that a religious perspective is both meaningful and true—as the social scientist is interested not only in showing how useful his science is but also in showing that some theory within it is meaningful and true. And that is a quite different enterprise. For useful as it may be to morality, society, and the future, religious commitment will not occur merely through the approval from a distance of those who see its utility. It will be effective—and useful—only if it is adopted and appropriated in thought and commitment, that is, if persons find a religious perspective meaningful and true, if through such a perspective their own existence, their destiny, and the human prospect are now seen to make sense and to have healing and redemptive power. Thus the role of the theologian is not so much to talk *about* religion as to talk *from* it and to interpret and understand not so much religion as all else from a religious perspective. Only then can he gain for himself and possibly provide for others glimpses of its meaningfulness, adequacy, power, and final validity. This is what I have tried to do with regard to the immense subject that Heilbroner has raised: the question of human nature, of historical process, of the character of freedom and creativity in relation to that process, and so the character of the human prospect. As I have tried to show, little he has said, I believe, has intelligibility and none of it has meaning and promise unless the historical process in which we move represents not only a destiny with responding freedom but also the intercourse between mankind and the divine mystery of creativity, judgment, and promised redemption.