RICHARD LEE CLINTON

POLITICS AND SURVIVAL

> . . . our political leaders have failed us in three major areas: in challenge, in faithfulness, and in candor. . . . There is, however, a second half to the equation, for citizens–followers–owe their country something that they too have failed to give. All too often our people look for the easy answer and for leaders who, in the words of Sidney Harris, will "reconcile the irreconcilable. . . and promise us a society where we can continue to be as narrow and envious and shortsighted as we like without suffering the consequences." So as citizens we have some obligations to fulfill, too, and foremost among them is an honest assessment of where we are heading.[1]
>
> Morris K. Udall

Toward the end of his new book, *An Inquiry into the Human Prospect,* Robert Heilbroner captures precisely the mood against which I am struggling in writing the present essay when he says, "With the full spectacle of the human prospect before us, the spirit quails and the will falters. We find ourselves pressed to the very limit of our personal capacities, not only in summoning up the courage to look squarely at the dimensions of the impending predicament, but in finding words that can offer some plausible relief in a situation so bleak."[2]

As a basically unfriendly reviewer of the book remarked, "The spectacle that Heilbroner's thesis represents is almost as distressing as his prospect for the race. Here is no Spengler taking sardonic pleasure in declines and falls. Here is a man of practical intelligence and good will, a man equipped by temperament and upbringing to hope. Yet his book is an epitaph on liberalism and written with conspicuous pain by an author who includes himself in the epitaph."[3]

In this brief space I cannot begin to demonstrate the factual basis for the conclusions upon which my remarks will be predicated. Nor can I, except in the most abbreviated way, suggest the measures required if we are to preserve any approximation of our present quality of life for our children and their descendants. These matters have been covered by others more qualified than I and can be pursued by reference to the sources cited throughout this essay. The tasks I shall attempt here are the limited ones of, first, seeking to establish the desperateness of our situation by pointing out some of the difficulties involved in our recognition of it and inherent in trying to deal with it, given the perspective and value commitments we are locked into; and, second, suggesting the scope of the response the situation requires. Even this is too ambitious a goal for an essay of this compass, but if I can succeed in motivating some of my readers to seek further understanding of the issues and to begin reflecting on what they can do in their own individual lives to contribute to solutions, my purpose will have been well served.

I feel uncomfortably presumptious in appearing to have any special insight into matters of such overarching significance, so let me acknowledge at the outset that few of the ideas in this essay are original. My thinking, as I will try to show, is largely an amalgam of the thoughts of the scores, indeed hundreds, of other scholars, scientists, and informed citizens whose writings have stimulated my concern for the

set of interacting issues I shall be discussing. That these issues and the implications of their interactions are still not widely recognized, at least not in proportion to their importance, bespeaks the overspecialization, heavy demands, and incessant distractions of modern life as well as the complexities of the issues themselves.

I

The set of interacting issues to which I refer can best be described in terms of the unprecedented stress being placed on our global life-support system; on the nonrenewable resource stocks of the planet; and on our political, administrative, and problem-solving capacities by the combined effects of rapid population growth, new technologies, increasing disparities in wealth, and heightened interdependence. In recent books the situation has been variously referred to as "the world problematique,"[4] "the predicament of mankind,"[5] and "the macroproblem."[6] Whatever the preferred designation, the essence of the situation is clearly that the quantity and quality of man's activities have reached levels at which, for the first time in the planet's history, their interactions are producing impacts on a global scale, some of which are potentially disastrous.

On a finite planet with randomly distributed resources and a global life-support system, continued population growth eventually results in a radical new form of interdependence. People in one area of the world depend on fossil fuels or grain or metals or sugar or a variety of other commodities and manufactured products from other parts of the world. No longer can any country or region pretend to independence, if only because pollutants cannot be detained at national frontiers and weather patterns in some areas can be drastically altered by interference with climate-influencing factors in other areas.

Such radical interdependence can produce either of two reactions among human populations organized in nation-states: competition or cooperation. Competition for the dwindling resource reserves of the planet will, of course, eventually lead to conflict, which will inevitably submerge concern for and attention to preserving both environmental amenities and crucial aspects of the planet's ecological balance as scarcities become more acute and the threat of thermonuclear Armageddon looms larger. Yet very little in man's history since the onset of civilization some five millenia ago suggests that he is capable of suppressing competition and conflict in favor of cooperation.

It is this simultaneous approach toward various types of limits—the limits of the ecosystem to reprocess wastes, the limits of nonrenewable resources, the limits of man's capacities for overcoming the obstacles to effective organizational responses to these and other accompanying problems—which makes our present situation so desperate, for our common sense should tell us that we are simply not able to handle problems of such magnitude and with so many unknown and counterintuitive interrelations all at the same time. In addition to the inadequacy of our intelligence gathering and organizational capacities and our inability to transcend short-term perspectives and expeditiously to override vested interests, there are further

obstacles to cooperative information sharing, rational problem solving, and coordinated planning inherent in our present ideological commitments and racial, religious, and ethnic prejudices. Overlooking or discounting these barriers, none of which is entirely absent when human beings are involved, can result from simple naïveté, Panglossian optimism, reckless self-delusion, or unbounded arrogance; in any case the consequences will eventually be the same—catastrophic.

In short, while it has been obvious to the more insightful for centuries that our fecundity, technological cleverness, and greed were in excess of our foresight, wisdom, and virtue, the new and determining factor in the survival equation is that the synergistic interactions of our fecundity, technology, and greed have now begun to surpass even nature's prodigious capacities to absorb our wastes and to supply us with the basic elements of life.

II

The implications of this altered state of affairs could not be more profound, for they mean that the basic conditions within which we exist are undergoing a drastic alteration, hence our values, beliefs, and behavior must be modified accordingly. Values, beliefs, and behavior, it should be recalled, are not immutable. They have changed in the past; in fact, they have been in a constant state of flux throughout man's history. They have changed as the conditions to which they were a response changed; and since the changes in those conditions were usually gradual, the modifications in values, beliefs, and behavior have traditionally also been gradual. The conditions under which man lives are being transformed now, however, with unprecedented rapidity; and the modification of our values, beliefs, and behavior must be accomplished with corresponding haste.

William Ophuls, one of the relatively few political scientists to bring an ecological perspective to the study of politics, has succinctly stated the crux of the changed conditions within which man now exists: "Things which used to be free goods [for example, water] . . . now become common property resources subject to the dynamics of competitive overexploitation. . . . What was free has become scarce and must therefore be placed under political and economic controls to prevent mutual ruin."[7] Lynton Caldwell, also in the vanguard of ecologically aware political scientists, explains the altered state of affairs with his characteristic lucidity: "When the fit between man and milieu is loose, voluntary individual adaptations are possible. When social pressures on the environment are severe and the man/milieu relationship is tight, politics replaces individual choice, and priority, rationing, or some other form of social decision overrides voluntary behavior."[8] Yet another of the handful of political scientists who have written on these topics, Victor Ferkiss, puts the matter more dramatically: "An existential revolution is under way that may destroy the identity of the human race, make society unmanageable, and render the planet uninhabitable. Bourgeois man is incapable of coping with this revolution."[9] Ophuls sums up the matter concretely for Americans in this way: "The individualistic basis of society, the concept of inalienable rights, the purely self-defined

pursuit of happiness, liberty as maximum freedom of action, and laissez faire itself all require abandonment or major modification if we wish to avoid inexorable environmental degradation and perhaps extinction as a civilization. . . . In the face of deep crisis, democracy may simply not be a valid system of politics."[10]

Few Americans are ready yet to accept such a sweeping indictment of their most cherished values, and the great danger is that too few can be convinced that the situation is really so serious in time to devise and implement more viable alternatives that still contain as many of the best features of our present system as possible. As Richard Falk, one of the earliest pioneers in political research on environmental problems, has put it, "There is not yet any appropriate sense of the magnitude of the task and of its urgency, and there is no understanding of the extent to which the protection of the environment will require an organizational and attitudinal revolution of a global scale."[11]

Our reluctance to embrace such a dire assessment of the state of the world is simply enough explained, for our historical experience, cultural biases, and psychological make-up enable us—perhaps compel us—to believe that things will go on more or less as usual, without major discontinuities and generally in the direction of "progress," and that man's ingenuity will provide solutions to any problems that might arise along the way. Are we not, after all, as David Potter has characterized us, "the people of plenty"?[12] Have we not come to rely on continuous economic growth to handle for us what has correctly been called the most difficult political challenge of all—the crisis of distribution? (Don't worry about the fact that your share is so much smaller than mine; look how much larger it is than it was last year or the year before. Just keep the wheels of industry turning; as long as the whole pie is getting larger, we'll all have bigger pieces.) Do we not derive solace—some degree of psychic security—in this kaleidoscopically changing world from our unarticulated, perhaps largely unconscious, faith in an underlying continuity; in certain basic premises; in the timeless, unchanging verities such as "growth is good," "bigger is better," "always look out for number one," "good fences make good neighbors," and "that government is best which governs least"? Yet the conditions which determine our continued existence are requiring us to recognize the limits to growth; the finiteness of the earth; the essential brotherhood of all mankind, all of whom are passengers on the same fragile spacecraft; the possibility of the community welfare's taking precedence over the individual within the hierarchy of values of each member of the community; and the wisdom of Nietzsche's paradoxical assertion that "freedom is the recognition of necessity."

The shift this implies in our thinking, in our outlook toward and expectations from life, in our view of man and his place in nature, and in our self-images could scarcely be more sweeping and profound. This radically altered way of looking at the world finds parallel in its impact on mankind as a whole perhaps only in the rise of monotheism, in the Copernican revolution, and in the adjustments attendant on Darwin's theory of evolution.

Kenneth Boulding grasped the essence of our position over a decade ago when he wrote:

> The twentieth century marks the middle period of a great transition in the state of the human race. . . . It may be called the transition from civilized to postcivilized society. . . . The word post-civilized. . . bring[s] out the fact that civilization is an intermediate state of man dividing the million years or so of precivilized society from an equally long or longer period which we may expect to extend into the future postcivilization.
> We must emphasize [however] that there is no inevitability and no determinism in making this great transition. . . . There are a number of traps which lie along the way and which may either prevent man and his planet earth from making the transition altogether or delay it for many generations or even thousands of years.[13]

André Malraux echoed Boulding when he recently said, "We are actually between civilizations. . . ."[14] William Irwin Thompson considers us at the climax of human cultural evolution, a point from which we "will now either slide back into a new Dark Age or evolve into a higher, more spiritual being."[15] Lester Brown, writing in 1974, perceives the situation thus: "There are numerous indications that we may be on the verge of one of the great discontinuities in human history—economic, demographic, political. . . . Changes in attitudes and values are required of people everywhere. The needed changes may far exceed those any generation has been called upon to make. . . ."[16] A year earlier, Frederick C. Thayer put it this way: ". . . whether we describe the transcendent experience ahead of us as a revisioning of history, a transformation, a paradigm change, or something else—the conventional wisdom of politics and economics can have no part to play in that experience."[17]

Surely by the end of 1974 the inadequacy of "the conventional wisdom of politics and economics" had become all too "perfectly clear"—more than a year having elapsed since the "energy crisis" and still no semblance of an energy policy; inflation and recession worsening simultaneously; corporate profits at record highs yet the stock market hovers uncertainly at a twelve-year low and unemployment rises daily; a "cap" negotiated on the strategic arms race with the USSR which allows for continued strategic expenditures on our part of $1,500,000,000 per year for the next ten years; and the majority of Americans continuing to overeat, while many of their aged countrymen subsist on dog food, and millions of people in the poorest countries face the spectre of famine.

III

One hopes that the broad range of scholars and scientists whose assessments were cited above add credence to my assertion that our situation is desperate. It is amazing, though, how many experts and opinion leaders can still be found who not only reject this assertion but who disparage as "doomsdayers" and "alarmists" those who dare make it. Why this occurs should be fully understood, for it confuses and baffles both policy makers and the public, who consequently are able to convince themselves that, since the problems are obviously too difficult for them to comprehend, they might as well not worry about them. Thus, in the wake of conflict among the experts, those whose responsibility is management of the society at large—our political leaders—find renewed warrant for ignoring long-term considerations in

favor of more immediate ones, although quite obviously a society is quintessentially a long-term project.

This cacaphony of discord among experts can be traced to a number of factors. In the first place, only over the past decade or so have many of the second- and third-order effects and counterintuitive interactions among exponential population growth, new technologies, rising affluence, and finite, natural life-support systems come to be recognized and understood by ecologists, oceanographers, medical researchers, and other specialists who devote themselves to the study of these interactions. Because they are so complex and because of the way scientific investigation is done, these problems have to be broken down into simpler, more homogeneous sub-areas, amenable to the techniques of different specialists. In today's world of exploding knowledge, however, it has become almost impossible for a well-trained specialist to keep abreast of areas beyond his own narrow field of expertise; hence, it is rare to find specialists who are able to visualize the overall context within which the particular problem they are studying occurs in the real world. The result is that the solutions prescribed by the various specialists studying different aspects of the same problem, although adequate perhaps for the limited aim for which they were designed, often create serious difficulties in other not always obviously related areas. These conflicting prescriptions, and the lack of any holistic view of the overall system within which the problems are interacting, account for a large part of the disagreement among experts.

Similarly, within the universities, which might reasonably be expected to be far ahead of other societal institutions in responding to such complicated problems, it seems that academic curricula and the people who design them are often too constrained by their disciplinary rigidities, departmental structures, and high levels of specialization to be able to react rapidly to new fields of knowledge or emerging problem areas, particularly when they do not fit neatly into a single already established field of inquiry or lack a vociferous self-interested constituency. Perhaps it is as an acerbic *Time* reviewer once remarked, "The implications of great societal upheavals like the Industrial Revolution were first grasped by 'crazies' like William Blake, whose ideas gradually percolated down to artists, savants, and finally pedants."[18]

Moreover, without implying a full-blown conspiratorial theory of power elites, it is obvious that there are powerful groups whose short-term interests are served by not calling too much attention to the growing number and seriousness of problems with which present economic, social, and political arrangements are unable to deal effectively, lest people begin to question those arrangements. Richard Falk has joined this issue and its implications with admirable directness:

> The need for drastic change suggests the likelihood of struggle between those who operate and benefit from the present political system and those who support the creation of an increasingly powerful world government. Good education, as always, should pursue a strategy of subversion, weakening confidence in existing arrangements, and even converting the old elite to the new vision; but it seems likely that the defenders of the status quo will condemn and suppress those who work visibly

and effectively toward a new world system based on an ecological vision of wholeness.[19]

Of course, not everyone who refuses to accept the seriousness and urgency of the situation is a defender of the status quo or in the employ of self-interested parties. Many are simply inadequately informed, others have an almost religious faith in either technology or man's ingenuity, some have so trained their minds to skepticism that they doubt everything, some have overreacted to the premature cries of wolf of earlier decades, not a few are merely incorrigible optimists, and a sizable proportion are, as John Graham has insightfully noted, "engaged . . . in repressing the fear that our world is slipping out of human control." Addressing himself particularly to his fellow medical scientists, but with obvious relevance for all professionals, he added, "We repress this fear, in part, by burying ourselves more deeply in technical preoccupations."[20]

Another aspect of the difficulty of perceiving the seriousness of the consequences of rapid population growth, resource depletion, environmental deterioration, and the overload on human problem-solving capacities is the gradualness and indirectness with which these problems manifest themselves. While the growth of global population from one billion in 1850 to two billion in 1930 to four billion today is anything but gradual in terms of man's three or four million years of existence as a species, it has been gradual and, perhaps just as important, continuous, and, therefore, "normal" in our lifetimes; hence, we seldom pause to question it. Similarly, it is hard to grasp the lethal nature of the process, both because its major effects occur in faraway lands and because no one ever seems to die of overpopulation.[21] The cause of death of millions of children who die each year is listed as diphtheria, measles, dysentery, or some other disease, but it is rarely mentioned that malnutrition and/or undernourishment had so weakened their resistance that they succumbed to an illness that a well-fed child might easily have shaken off. When a tidal wave took the lives of more than three hundred thousand men, women, and children in Bangladesh in 1970, few noted that they were in fact victims of overpopulation. These miserable people knew that the lowlands they inhabited were subject to tidal-wave flooding, but population densities were so high in safer areas that they were forced to settle wherever they could find empty space. Yet we think of their having drowned rather than having died of overpopulation.

The depletion of resources is also difficult to perceive because of the way the growing scarcity is filtered through the economic system. As the increasing scarcity, of, say, a given metal drives its price up, another metal or alloy with similar properties, which might formerly have been considered too expensive for many uses to which the now scarce metal was put, becomes price competitive and is substituted for the increasingly scarce metal. All the public, and apparently most policy makers, notice is the higher price of the finished product, not the steady depletion of the unrenewable resource. The science of economics further contributes to disguising the seriousness of the depletion of nonrenewable resources by assuming that such substitution can continue to take place indefinitely, as long as increased costs of a superior grade of ore make it "economical" to refine an inferior grade. No physical

limits—for instance, the availability of energy or water or the capacity of the environment to process wastes—are taken account of in the economists' calculations.[22]

In like fashion, the overall impact on the environment, that is, on our global life-support system, goes largely unmonitored and unreported. We hear about the results of the more shocking insults to the environment when chemical-laden rivers catch fire, whole cities are endangered by smog or by carcinogenic drinking water, and our national symbol, the bald eagle, is threatened with extinction; but we have little comprehension of the myriad ways in which the day-to-day activities of industrial civilization are steadily poisoning the ecosystem. How many of us are aware that the level of DDT is higher in the milk of American mothers than the law allows in cow's milk? that mercury concentrations have already made some types of ocean fish unsafe for human consumption? that one of the most basic components of plastics, vinyl chloride, has in some circumstances produced an incurable and always fatal form of cancer of the liver in human beings? that our use of aerosol products last year alone resulted in the release of a million tons of fluorocarbon gases into the stratosphere where they may be destroying the ozone layer which protects us from cancer-inducing ultraviolet radiation? that generation of electricity by nuclear reactors produces as a waste product vast quantities of plutonium-239, a material so deadly that inhalation of one-millionth of a gram induces lung cancer and so long-lived that it must be kept sealed off from the biosphere for tens, perhaps hundreds, of thousands of years? or that the only major obstacle in the path of terrorists, criminal elements, or crackpots who might seek their nefarious ends through nuclear blackmail has been the difficulty of acquiring fissionable material such as plutonium-239, which is now becoming ever more accessible as "peaceful" nuclear reactors are built all around the world?

IV

What, then, is to be our response to this unprecedented conjunction of events? No one, of course, can say, although a probable range of alternatives can be inferred and a preference for some rather than others expressed and defended.

In attempting to guess the proximate future, the least risky procedure is to assume a continuation of the present. This was the course followed by the Meadows' team in their seminal study *The Limits to Growth*. The projections their computer simulations generated by extrapolating from present trends were not pleasant to contemplate, the basic behavioral mode being one of "overshoot and collapse." As their myriad critics invariably insisted, as if the Meadows and their collaborators had not been at pains to make the point themselves, such a more-of-the-same strategy has obvious inadequacies when used for long-term forecasting, since new variables are likely to enter the picture as time passes and events occur. It is in regard to those new variables that I would like to speculate, for it is in them that whatever hope we may have lies.

Desperate situations have, of course, been confronted by man at many points throughout history, and much can be learned by referring to these examples as long as the differences between them and likely future situations are kept clearly in

mind. While the possibility of a uniquely innovative response cannot be ruled out, it seems reasonable to suppose that any new variables that enter into the equation will resemble to some degree one or another of these past responses. Generally speaking, these responses have been of three kinds: (1) more-of-the-same approaches or new but ineffective innovations were attempted, with chaos and anarchy eventually resulting from their failure to cope with the new challenges; (2) either just prior to the disruption of society or after some period of it an authoritarian regime might arise either through conquest or revolution with the power to force compliance with rules —usually very unpleasant ones—designed to meet the challenges; or (3) a religious or moral revitalization movement might sweep the population, often as the result of the appearance of a Messiah, prophet, or spiritual leader, changing the people's values, beliefs, or patterns of behavior in a way allowing for adjustment to the challenges.

Probably other types of responses have occurred, but most seem to fit within one or another of these three basic categories. Of the three, the last has been perhaps the least frequent, yet it is some variation on that theme which must be forthcoming if we are to avert human misery on an unprecedented scale and the perhaps total destruction of our biosphere inherent in either the chaos and turmoil accompanying the gradual breakdown of our institutions or the titanic struggles sure to emerge along with totalitarian regimes. Nothing less than such dire consequences seems realistic to contemplate when it is recalled that global population has reached levels which cannot be sustained without massive worldwide transfers of resources and commodities and that we continue to live under a nuclear sword of Damocles.

Thus, while some version of alternatives (1) or (2) would seem more likely, the great task of our times is to attempt to bring about a functional equivalent of alternative (3). I recognize how unfashionable such a suggestion is and, indeed, how it seems to fly in the face of several centuries of steady secularization of society. Let me hasten to explain, therefore, that the sort of functional equivalent of alternative (3) I have in mind involves philosophical innovation and political leadership, not a return to mysticism or state religions.

As Gregory Bateson wrote in 1972 ". . . the next five to ten years will be a period comparable to the Federalist period in United States history. New philosophies of government, education, and technology must be debated. . . ."[23] One might quibble with Bateson's estimate of when it will begin or how long it will go on, but the necessity for such a debate is incontestable. What must issue from that debate is a global Declaration of Interdependence and a revised national Constitution with principles of law and governance congruent with the new realities of life on a spaceship with too many passengers.

For this to occur, however, the crucial catalyst is enlightened political leadership, a resource ever in short supply and seemingly already depleted on this continent. Mercifully, however, such leadership is not a nonrenewable resource. Like that most elusive of political concepts—power—leadership exists only in a relational

sense, depending on the responsiveness of those led as well as on the qualities of the leaders. Thus, altering the consciousness of an electorate—making them responsive to issues and challenges which they had been ignoring—may reveal the existence of leaders who formerly had gone unnoticed.

By good fortune, the United States enjoys four salient advantages of incalculable importance in the race with time to effect such a change in consciousness on the part of the public: (1) a literate population; (2) our First Amendment freedoms of speech, press, and peaceful assembly; (3) our institutions of higher learning and the tradition of free inquiry and expression upon which they rest; and (4) a mass media system that reaches into the home of practically every citizen of the country.

It these formidable advantages can be utilized astutely enough by the increasing number of thoughtful and respected people who are becoming aware of the dimensions of the menace that threatens and of the magnitude of the changes which must be brought about, there is hope that the American public can be sensitized in a relatively short period of time to the type of political leadership needed. When this occurs, and the events of the next few years should help the process along considerably, the possibility is enhanced that enlightened leaders will appear—men and women with integrity and vision, dedicated to serving humanity rather than special interests; men and women who now reject political careers because of the hypocrisy and moral compromise which presently are part and parcel of the American political process.

Ah, it is argued, but that process and its symbiont, the free enterprise economic system, have served us well for, lo, these two hundred years! They have given us, as our business leaders are wont to proclaim, the highest standard of living in the world. Certainly they have faults, their apologists concede, but withal they have functioned better than any other system, and, anyway, it's an imperfect world; it would be unrealistic to demand perfection. Such arguments ring true for the pragmatic American, reared in traditions of original sin, patriotism, competitiveness, and laissez faire, but they overlook a number of crucial considerations.

In the first place the longevity of our political system is hardly solid evidence of its intrinsic resilience and workability. We should recall that it proved incapable of dealing, without recourse to war, with the two most severe trials it has undergone; I refer, of course, to the separatist movement of the South and to the Great Depression. Moreover, the vast wealth and wide-open spaces of the territory over which it rules provided the system with wide margins of error, enabling it to write off mistakes, miscalculations, and neglected opportunities for which most political regimes and economic orders would surely have been held accountable and probably transformed. The natural richness of the North American continent and its original sparseness of population also acted as a lubricant for the political system in another important way, since the potential for seemingly unlimited growth kept the people busy pursuing their personal goals of upward social mobility and affluence, virtually guaranteeing the smooth functioning of the largely unmonitored and almost superfluous government.

Of course, government provided the law and order, monetary system, and some of the infrastructural underpinnings essential to economic development and even made more active contributions in a variety of ways, but, by and large, economic development took care of itself in this country. Under the kinds of conditions which existed during the first century and a half of our history, minimal governmental interference and often generous governmental cooperation with commerce and industry meant that economic growth could proceed apace, unplanned and largely unregulated. We tend to give our political and economic systems major credit for this accomplishment, and unquestionably they were a help, but does it make sense to expect the same political and economic arrangements to serve us equally well in achieving very different goals under radically altered circumstances?

The 75 per cent of our population now concentrated on 2 per cent of the national territory in and around our metropolitan areas is totally dependent on the uninterrupted production and flow of goods—particularly water, energy, and agricultural produce—and removal of wastes. Can a political system be called responsible if it does not plan for coping with as wide a range of adverse contingencies as possible to keep disruptions of such production and flows to a minimum? Is a political system which leaves most production and allocation decisions in private hands and is philosophically committed to a minimum of regulation capable of devising such plans?

As the web of our interdependence becomes ever more elaborate and complicated; as the depletion of resources results in more frequent shortages, soaring prices, widespread unemployment, and other economic dislocations; as every group capable of organization seeks to protect its own interests in ways often inimical to the public welfare; and as environmental limits are approached and ever more perilously strained, the demands on our political system are multiplied manyfold. Can a system dedicated to the proposition that "that government is best which governs least" successfully cope with such an avalanche of demands? Can a system which has relied on continuous economic growth to resolve its most difficult problems suddenly grasp the nettle and begin to make hard political decisions on its own? In short, can a system geared to affluence continue to function under conditions of scarcity without major modification?

The cruel prank which history has played on us is that just as it is becoming clear to the most thoughtful that we must cease continuous growth and learn to live in harmony with our environment if we are to survive, it is becoming far more difficult for our government to attempt such a policy, since only through continued growth can the fast-multiplying demands on the system be accommodated without completely restructuring the system. Needless to say, there are vested interests within and without any ongoing political-economic system which oppose any such restructuring, so as things get worse—as growth-related problems multiply—the prospect is for most governments, including our own, to reject appeals to limit growth and instead to redouble their efforts to promote it. Indeed, the United States government's response to the energy shortage of 1973-74 has followed precisely this

pattern, with environmental protection measures being relaxed and national forests, oil shale mountain ranges, and offshore areas being opened up for exploitation by the oil companies.

Another argument of the proponents of continued reliance on our tried and true political and economic institutions rather than risking experimentation with radical new approaches is that old saw about "the highest standard of living in the world" and its corollary "no other system has done as well." It is not my intention to denigrate the truly remarkable achievements made to date under our present system, but it is impossible to overlook how disproportionately material these achievements have been and how little attention has been paid to other vital aspects of human welfare and development—e. g., national health and dental care; equal opportunities for all races and classes (and both sexes) in education, employment, political participation, and recreation; quality public education; efficient mass transportation; preservation of the environment; etc. It is equally impossible to overlook the growing number of social pathologies which stain the reputation of our society and threaten the quality of our lives—e. g., crime; violence; narcotic addiction and alcoholism; mental illness; child abuse; broken homes; neglect of the aged; alienation; and an enervating sense of powerlessness, frustration, and fatalism which increasingly pervades even the better-off in the society.

To point to these uncomplimentary aspects of the system is not to deny its accomplishments but to question its priorities and the use it has made of the resources it has had available to it. As these resources dwindle, the way the priorities of their use is decided and precisely what these priorities are become increasingly important to society as a whole, which is to say they become increasingly important *political* questions that can no longer be left to private interests or to an assumed "invisible hand" to resolve.

Finally, those opposed to new and radical methods for handling the new problems which face us always seem to return to the truism that it's a far from perfect world as grounds for asserting that we should be satisfied with a system that has worked, however imperfectly, for two centuries. They label as utopian and visionary, if not Socialist or pinko-Communist, efforts to equalize opportunities, to regulate business activities in the public interest, and to relieve people of the fear and insecurity of not being able to provide a minimum level of income and medical care for themselves and their families.

Of course, not everyone in our society reacts so negatively to ideas such as these, but a disappointingly high proportion do, and many others who favor the ideas in principle consider them unworkable or infeasible in practice. Both reactions are curiously at odds with our deeply internalized approval of and faith in technological innovation. It would be "un-American" indeed to suggest that we be satisfied with our present level of technology and cease to strive for continued advances. And it would be almost unthinkable for an American to dismiss out of hand the possibility of a new technological breakthrough enabling us to perform even the most difficult feat. After all, a nation that can put men on the moon. . . ! Yet our expectations for

improvement in social technologies—in the capacity of our public institutions to manage social problems—are at a self-fulfilling low. We suddenly become literal interpreters of the Bible, piously subscribing to the view, "The poor ye have with ye always."

It is tempting to try to trace the origins of this pessimism about our ability to improve our social technologies, but the point to be made here is that with enlightened political leadership the possibility exists that we could break through that pessimism and restore our faith in ourselves. Political leaders who respect our intelligence by being straightforward and truthful might find their constituents less confused, better informed, more trusting, and more tolerant when mistakes are made. Political leaders who inspire us by calling our attention to what could, indeed what must, be done instead of what has been done in the past might find a public more willing to postpone immediate gratification. Only political leaders who help us to understand the problems confronting us, who explain all the options open to us and the likely costs of each, who stimulate our imaginations and mobilize our energies can move us away from the competitive, materialistic, exploitative, individualistic ethic to which we are inured and toward a set of values based on cooperation, full human development, respect for the natural systems of which we are a part, and the solidarity of all mankind.

And only such a metamorphosis of our values will suffice if we are to succeed in preserving a quality of life at all comparable to that we have enjoyed to date. Anything less than such an unparalleled shift in values will find us first in the straits which Japan has reached already and eventually in a world which we of today could hardly recognize and in which we would probably be psychologically and perhaps physiologically incapable of surviving. Whether our grandchildren would be able to survive in such a world is, of course, moot, but the opinion they will hold of us if they do can be surmised with considerable certainty: they will excoriate us for our unpardonable perversity, for the quarrelsome, vainglorious, moral midgets which each evening's news report shows us to be.

Our primordial need, in Benjamin DeMott's words, is "for a politics of institutional transformation"[24] that can create the conditions for the kind of moral and political leadership our current situation demands by giving meaning to our lives, restoring our faith in ourselves and in our fellow man, and rebuilding trust in our capacity to meet the challenges which confront us, if not with complete success at least with rationality and justice. This is not to imply that we should expect the state to solve our problems for us—only that we must realize that no other institution is even theoretically capable of making a credible attempt.[25] We will still be plagued with all the inefficiencies and dysfunctional emergent properties of bureaucracies. There will still be corruption and mismanagement to contend with. Frustration, alienation, and apathy will hardly disappear. The point is not to make things perfect, however, but to make them better.

In pursuing this limited goal we are greatly favored by how bad our habits have become, for even modest changes in them can show immediate positive results. Simply limiting the size of automobiles to a maximum of 2,500 pounds would (1) substantially cut our energy import requirements, thereby lowering our dependence on foreign powers and improving our balance of payments; (2) reduce the rate of depletion of scores of raw materials; (3) improve the quality of our air; (4) lessen the carnage on our highways; and (5) even make it easier to find a parking place. Construction of an adequate system of mass transportation, beside providing thousands of jobs, would multiply these benefits many times over. Further substituting vegetable oils for animal fats, poultry and pork for beef, and soya and pulses for animal protein, would not only free up vast quantities of grain for export to the world's hungry but would reduce many of the diet-related disorders Americans currently suffer from. Better insulation, less commercial lighting, more sensible pricing policies by utility companies, and other relatively simple measures could result in a 30 per cent improvement in the efficiency with which we use electricity, thus conserving our fossil fuel supplies and weakening the case for strip mining, offshore drilling, and nuclear reactors. Transferring the fertilizer we use on our lawns, golf courses, and cemeteries to the less developed countries would result in significant increases in the crops grown in those chronically malnourished areas, with immeasurable benefits for their developmental efforts and a lessening of the pressures on our food-producing capacity which have lately driven food prices so high. A return to the frugality and simplicity that once characterized Americans would, of course, prolong for decades or longer the resources which at current rates of consumption will be exhausted in a few years, in addition to ameliorating our devastating impact on our ecosystem and perhaps restoring our ability to enjoy the little things in life which those we have called wise have always told us are the most important.

At a minimum, individual efforts at conservation and recycling would enhance our badly eroded sense of personal efficacy and sensitize us to the unconscionable waste and environmental damage being caused by certain corporate interests and governmental entities such as the Army Corps of Engineers and the various branches of the military—and growing public intolerance of such practices is the stuff of which enlightened political leaders are made.

To repeat, the relationship between a people and their leaders is reciprocal; the better leaders we deserve, the better we will get, but also vice versa—hence, the necessity of doing everything we as individuals can to make our system responsive to make it live up to the spirit of the timeless ideals expressed in our Declaration of Independence:

> That to secure these [unalienable] rights, Governments are instituted among Men, deriving their just powers from the consent of the governed,—That whenever any Form of Government becomes destructive of these ends, it is the Right of the

People to alter or to abolish it, and to institute new Government, laying its foundation on such principles and organizing its powers in such form, as to them shall seem most likely to effect their Safety and Happiness.

What is needed is to restore the primacy of politics in our social life. We must learn again what the ancient Greeks knew well, that the highest virtue is the ability to participate wisely in public affairs. We must learn to accord our greatest esteem to those of our fellow citizens who dedicate themselves to public service rather than to those who manage to amass the largest material accumulations. At present we are expected, indeed it is demanded of us, to spend most of our time working in our own individual interest, and we honor those who can show the most for their efforts. By necessity, we delegate responsibility for public affairs to elected representatives, yet they are usually as much a part of our self-centered cult of the individual as are we and are equally as caught up in the materialism of our present societal reward structures. Is it any wonder, then, that they often pay disproportionate attention to the rich and powerful interests which court their favor and that they occasionally succumb to the temptation to feather their own nests? The wonder is that so many resist this temptation and strive to serve the public interest fairly, even though so few of their constituents follow their actions or even bother to communicate their approval.

Perhaps the greatest intellectual challenge of the moment is to help people regain the insight that we neglect involvement in political choices at our peril, that when politics is widely considered "a dirty business" many of the potentially best leaders are lost to the process, and that without effective and enlightened political leadership there is no possibility of minimizing the traumas of the period of profound changes we are entering.

The sense of personal powerlessness which pervades American society today is more easily explained than dispelled, yet it is one of the principal obstacles to creating conditions conducive to the emergence of enlightened political leadership. Being one of more than 212,000,000 citizens inevitably dwarfs one's sense of efficacy in being able to make one's voice heard, but the American genius for organization is making it possible for us to do just that. Public interest groups and citizens' lobbies such as Common Cause, Public Citizen, the Environmental Defense Fund, and dozens of more specialized organizations have been formed for precisely the purpose of channeling the voice of the people into the halls of power. These and many other groups also perform the invaluable service of monitoring the decisions and actions of our representatives and leaders and communicating this crucial information to us so that our votes can be informed and discriminating choices rather than empty symbolic gestures. These organizations, even in their early years and with limited finances, have proved in case after case how effective they can be. With enlarged and active memberships, their potential for making the system more responsive and responsible is enormous. We have not earned the right to resign ourselves to cynicism or despair until we have supported these new institutions and found them wanting.

What is required, however, goes far beyond these first steps, indispensable though they are. What is required is an effort comparable to but probably exceeding that of the mobilization this nation underwent in the context of World War II. Every activity must justify itself in terms of its potential for contributing to our ability to manage the crises ahead and to foresee and avoid as many of them as possible.

Unlike in World War II, however, the enemy against whom we fight will not be so easily perceived nor so readily portrayed as vicious and hateful. In Pogo's immortal words, "We have met the enemy, and they is us." The difference between the two situations is not trivial, for the burden placed on our political leaders will be infinitely greater as they struggle to convince us that we and many of our most basic values are our own most dangerous foes.

V

I hope I have succeeded in conveying the awesomeness and urgency of the situation we face without overpowering the reader's resolve to struggle against it. This is the Scylla and Charybdis I navigate between each semester in my courses on population and politics, and I'm afraid I have yet to pass the straits unscathed. It is so easy, especially when one is young, to convince oneself that everything will work out for the best, that someone else will take care of it, or even that, if things are so bad, I might as well enjoy myself while I can. Only political leaders supported by the authority, legitimacy, and mystique of the nation, and one hopes by some charisma of their own, can possibly convince a critical mass of citizens that the situation is as desperate as it is and thus requires daring measures to meet it.

I recognize the dilemma of the chicken-or-egg relationship between the quality of the citizenry and the quality of the leadership which emerges to guide them. All I can say is that the two are mutually reinforcing and in a kind of dynamic equilibrium. It would be tragically self-defeating to abdicate our individual responsibility and simply sit back and hope that enlightened political leaders will come forth; the only truly human alternative is to do everything we as individuals can to make the system open and responsive and thus conducive to their emergence.

Revolutionaries will scoff at such apparent naïveté, while reactionaries will redouble their efforts to suppress such subversive doctrines. Neither group has anything to offer in resolving the dreadful problems we are beginning to confront until they shed their ideological lenses and recognize whence our most imminent threats derive, namely, from (1) the addiction to unending growth, (2) the assumption that man can continue to dominate nature with impunity, and (3) the conviction that sovereign nation-states are the only proper form of organization for human populations. These traits are common to all present political systems and regimes, to all social strata and economic classes, indeed to almost all people everywhere. Current ideologies of the left or of the right gives us no purchase on these sorts of problems. Only a political philosophy informed by ecological consciousness and ecological understanding can provide such a purchase. And only an ethics founded on

an ecological vision of wholeness, interconnectedness, and mutual obligation can bring us to reject the values which have fostered our superaffluence and unbalanced overdevelopment that now exacerbate the problems of our planet and so obstruct efforts at resolving them.

As Lynton Caldwell has said, "The ultimate outcome of the [ethical and institutional] changes that are required can be hardly less than a new phase in the development of human society."[26] It may seem utopian to expect so much in the short time left before it is too late, when we have evolved so little in this regard in preceding centuries, but the truly quixotic course would be to attempt unabated growth of population and material goods in a finite world already straining many of its natural limits. The early warning indicators are flashing "system overload" from every direction; to persist in our present patterns of incessant strife and wanton destructiveness is to invite certain retribution from the instruments of death we have amassed or from our ravaged ecosystem. To welcome a slowing of growth in Gross National Product does not, however, mean freezing all economic sectors at their present levels of output, with the obviously unacceptable unemployment and other disruptions this would entail. Our unmatched productive capacity must be utilized to the fullest for decades to come to provide the food, tools, and equipment that can facilitate the development of Third-World nations. Such uses of our productivity will simultaneously cushion our gradual transition toward a steady-state economy while enabling Third World peoples to bring themselves to a level of material well-being at which they can begin to accept the idea of following our example.

Nor would a shift from our present energy-intensive life styles to a simpler less wasteful way of life expose us to undue hardship, if such a shift could be made before too much more time elapses. True, many of the conveniences we have come to expect and many of the luxuries we may have enjoyed—or aspired to— will have to be foregone, but these sacrifices will be insignificant compared with those we would soon be forced to endure should we refuse to make them, and, moreover, they are often the sorts of sacrifices which turn out to be blessings in disguise, as when riding a bus to work instead of driving enables one to get to know one's neighbors.

Similarly, a slowing down and eventual cessation of economic growth need not imply any parallel reduction in the growth of opportunities available or in the rate of scientific and technological advance. On the contrary, as less time and energy are expended in needlessly competitive and unproductive pursuits, such as advertising and excessive packaging, to cite two seemingly trivial but pervasive examples, more service-oriented and research activities could be encouraged. As populations stabilized, a spur to technological innovation and automation would be provided by the declining numbers of new entrants into the labor force, and as improved technologies resulted in greater efficiency and less demand for labor, more service jobs could be created to meet the needs of a population with greater and greater amounts of leisure time.

Again, the magnitude of the value changes required is enormous, for people must learn to want to use their leisure time in productive and non-resource-intensive ways—for instance, in broadening their education and skills, in cultural pursuits, in sports, in time-intensive activities such as deepening friendships and child rearing. Merely to allude to the magnitude of the challenge, however, is also to suggest the scope of the opportunities and fascinating areas for involvement which will accompany movement toward a steady-state economy. These challenges and opportunities are the truly unlimited frontiers which man can explore and conquer infinitely.

Far from any connotation of stagnation or indication of antipathy toward science and technology, the idea of a steady-state economy is predicated on never-ending intellectual and moral growth and scientific progress. As Philip Handler, president of the National Academy of Sciences, recently noted, "The fruits of science did much to make our civilization worthwhile; now only political leadership combined with yet more science can save that civilization."[27] But as Caldwell reminds us, "The problem of applying science is not primarily a matter of knowledge, but of public will. . . ."[28]

Perhaps the reason our ethical and political evolution has not kept pace with our scientific and technological advances is that our survival never seemed to depend on it. This has not been the case at least since the success of the Manhattan Project, but only with the aid of more recent ecological insights are the less prescient of us coming to take seriously the altered circumstance that henceforth our survival does depend almost entirely on our ethical and political maturation. If this realization can be generalized in time, there is no predicting man's response, for, among the examples of the grandeur of the human spirit which history holds, most have shown man to be at his best when undergoing his direst tests.

In the nightmarish tragedy which seems to be inexorably building to its climax about us, two straws of hope remain yet to be grasped. Warren Wagar perceived them both over a decade ago, and I can do no better than to appeal to his eloquent statement of them. On the one hand,

> All through history, men have responded to the collapse of old social orders by creating new social orders extensive enough to secure civil peace and humane values within the geographical limits of the society. In the present crisis, since here on earth geographical limits no longer exist, the only possible response true to man's nature as a social animal is the building of a world civilization. If the response has succeeded before, on a continental scale, it can succeed again, on a planetary scale.[29]

And on the other hand,

> No sober assessment of our chances, not even the soul-sickness endemic in our times, can rob us of the Nietzschean joy of confronting with courage a world in disintegration. . . . and Albert Camus tells us . . . "The struggle itself toward the heights is enough to fill a man's heart."

. . . We are the link between the traditional civilizations of a well remembered past and the emergent world civilization. We stand between. . . . Such a task against such towering odds joins man to man and weaves meaning into the vast fabric of confusion. It can be the difference between the life and death of the soul.[30]

What must be done, then, is to make people understand the gravity of our plight while at the same time inspiring them with the confidence that they still can affect their destiny. In accomplishing this task, shallow optimism is as out of place and counterproductive as either fatalistic despair or reliance on faith that some supernatural power will deliver us. What must be inculcated is trust in ourselves, if not to solve every problem or to prevent every disaster, at least to prove again the magnificence of the human spirit. It may well be that we will learn that human dignity thrives better in the harsh climate of adversity than in the lush warmth of affluence.

Notes

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