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THE SHADOWY TERRAIN

THESE are days of radical revaluation of basic human goals. People are asking searching—and sometimes unsettling—questions about the self, about knowledge and how it is obtained, and about meaning. Actually, questions about the self soon slide into an inquiry into what the self does, since after it is decided that the self is simply awareness, or self-consciousness, not much can be added. The self, in short, cannot be understood—that is, described or defined—except in terms of action.

What is the activity of the self? A reasonable reply would be, *knowing.* Through knowing the self extends its radius. All deliberated actions are based on knowing, and from this it follows that a better understanding of what we think of as knowledge gives some instruction in the nature of the self.

The provocations for asking what and how we know are well known. We are becoming distrustful of Science, and science has been, until recently, the only reliable way of knowing. The present distrust grows out of pragmatic reasoning: our world, presumably constructed by science, is not working very well, and therefore either science or our use of it is at fault. So we inspect science and its uses. Recent critics have pointed out that whatever our mistakes in the application of science, there are rules or limitations in science itself which predetermine its use. Science doesn't tell us, these critics say, what we most need to know, and when we look to other methods for knowing such things the scientists discourage us by saying: "You won't find anything out that way—it's not objective."

So there has been—and is—rebellion. Even some scientists are among the rebels, as for example Michael Polanyi and the late L. L. Whyte. Most articulate and persuasive among the critics of science, and probably the most listened to *by* scientists, is Theodore Roszak, the humanist cultural historian, author of *Where the Wasteland Ends.* In a letter to *Science* for March 7, Mr. Roszak defended his position, declaring for "a kind of knowledge other than scientific knowledge—a knowledge that is augmentative rather than reductive, that honors and invites the aesthetic, sensuous, compassionate, and visionary possibilities of experience as well as the rational and technical." Such knowledge, he maintains, need not exclude what we think of as scientific knowledge, but would embrace it as part of a Maslovian hierarchy of ways and objects of knowing. His contention is that—

> reductionism has been a central and integral part of the scientific tradition since its inception in the 17th century that science has provided a peculiarly fertile medium for its proliferation; that it distorts our understanding of man, society, and nature more today than ever before; and that the scientific community remains as oddly impotent to purge the vice now as in the past. In short, I do not think reductionism is a skin blemish of science but the blood poisoning of the profession. . . . This, I think, will continue to be so until scientists reflect deeply upon the psychology of objectivity and its proper place in our total experience of nature. . . . It is impossible for me to see that what I have suggested deserves to be called "anti-scientific" or "antirational." If, however, that formulation is held to be an "attack" on science, so be it. But it is intended as a therapist's attack upon a neurotic complex that profoundly flaws the epic grandeur and humane potentialities of science.

In *The Psychology of Science* (Harper & Row, 1966), A. H. Maslow made a similar declaration and appeal. He wrote in his Preface:

> One basic thesis which emerges from this approach is that the model of science in general, inherited from the impersonal science of things, objects, animals, and part-processes, is limited and inadequate when we attempt to know and understand whole and individual persons and cultures. It was

> primarily the physicists and the astronomers who created the *Weltanschauung* and the subculture known as Science. . . . This has been pointed out by so many as to amount to a truism by now. But only recently has it been demonstrated just how and where this impersonal model failed with the personal, the unique, the holistic. Nor has an alternative model yet been offered to deal validly with the fully human person. . . .
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> In the broad sense, science can be defined as powerful and inclusive enough to reclaim many of the cognitive problems from which it has had to abdicate because of its hidden but fatal weakness—its inability to deal impersonally with the personal, with the problems of value, of individuality, of consciousness, of beauty, of transcendence, of ethics. In principle, at least, science should be capable of generating normative psychologies of psychotherapy, of personal development, of eupsychian or utopian social psychology, of religion of work, play, and leisure, of esthetics, of economics, an politics, and who knows what else?

The question Maslow set out to answer is *why* science contracted its competence to deal only with the objective, the external. Why did it adopt reductionism as its guide? In several chapters in this book, as well as in other writings, he shows that there are two ways to practice science. One is daring, inventive, and risk-taking; the other is safe, fearful of uncertainty, and security-seeking. The latter sort of practitioner, it becomes evident, turns his apprehensions and dislike of the unexpected into rules for preserving scientific certainty. "I am the master of this college, and what I know not is not knowledge." Practical illustrations of this division among scientists are easily found, especially available in books like Polanyi's *Personal Knowledge* and Thomas Kuhn's *The Structure of Scientific Revolutions.* Maslow wanted science to become a conscious enterprise in overcoming the distortions of this division:

> The path to the full truth is a rocky one. Full knowing is difficult. This is true not only for the layman but also for the scientist. The main difference between him and the layman is that he has enlisted in this search for truth deliberately, willingly, and consciously and that he then proceeds to learn as much as he can about the techniques and ethics of truth-seeking. Indeed, science in general can be considered a technique with which fallible men try to outwit their own human propensities to fear the truth, to avoid it and to distort it.

The study, understanding, and reform of science, then, is a project in understanding human nature. There is in some men, often in the bureaucrats and bookkeepers of science—and of other undertakings—a fear and suspicion of creativeness, leading to "counterphobic defenses against it." These defenses become institutionalized barriers to holistic truth-seeking. Study of such psychological realities in scientists and all human beings, Maslow maintains, "should illuminate the eternal struggle within each of us against our own self-actualization and our own highest destiny." Failure to recognize the barriers to fresh discovery would be fatal to human progress:

> The greatest danger of such an extreme institutional position is that the enterprise may finally become functionally autonomous, like a kind of bureaucracy, forgetting its original purposes and goals and becoming a kind of Chinese Wall against innovation, creativeness, revolution, even against new truth itself if it is too upsetting. The bureaucrats may actually become covert enemies to the geniuses, as critics so often have been to poets, as ecclesiastics so often have been to the mystics and seers upon whom their churches were founded.

What has Maslow accomplished in these few passages? He has restored Science to a place in the Humanities; he has moved the issues about science back to the classical age—actually, to a pre-Aristotelian stance or outlook—and invited consideration of them in a Platonic spirit.

Aristotle, as Robert Cushman shows in *Therapeia* (Chapel Hill, 1958), was interested only in the kind of certainty that rests upon evidence of the senses plus logical demonstrations. This knowledge is what scholars call *apodictic*—necessary and inescapable. Once established, it demands conformity. It is, you could say, a sure-thing view of knowledge or truth. Logical inference from established facts

cannot be evaded, and every sort of person—both bad and good—must admit the conclusions reached.

Plato acknowledged the value of this objective sort of certainty but held that the uncoerced conclusion represents a higher and more important order of truth. The highest knowledge, he maintained, can never be compelled. This is knowledge we have to see for ourselves. Understanding it depends upon assent, and begins with the longing to know. An ethical frame of mind is prerequisite to finding it out. This truth is self-authenticating; the dialectic moves circuitously in its direction, but it cannot insist or compel.

Aristotle casually disposed of this activity, calling it a mere "exercise," and formulated in contrast what became the fundamental ethos of the "scientific" outlook. As Cushman says:

> There is no escaping the conclusion that Aristotle largely abandoned the truth of self-authenticity for the truth of apodictic certainty, the truth of the syllogism. After all, only such truth was publicly verifiable. This judgment is not significantly altered by Aristotle's concession that the "laws of thought" are self-evidently true. If one is to have an intelligible world at all, something must be acknowledged as "given" in order that knowledge may get a start. At the moment it is enough to point out that Aristotle evaded Plato's problem of pedagogy by restricting knowledge to the sphere of cogent inference from acknowledged premises. Henceforth the character or disposition of a man seemed to be of no consequence in his attainment of *episteme.* Proof seemed to make both *ethos* and *eros* irrelevant to the achievement of truth.

Readers of Michael Polanyi's *Personal Knowledge* (or his much briefer *Science, Faith and Society*) will recognize that its purpose and direct implication is to restore both *ethos* and *eros* to the very foundation of even the physical sciences; and students of Maslow will see that in his work the principle of *self-authentication* is made the basis of a new, humanistic psychology.

The acts of these modern thinkers in behalf of a conception of science which includes both the inner and the outer side of human existence, which has roots in moral awareness as well as in the world of forces, bring our questions and discussion into the presence of an awesome mythical figure revered by the ancient Greeks. Prometheus, by an act of defiance, endowed human beings with the fire of mind or self-consciousness. It was the gift of pre-vision, which grows from the exercise of high rationality, and in the Titan is united with the spirit of compassion. All this is represented in the single figure of the god who is the fore-thinker, the one who knows—indeed, the *scientist* in a generic sense. Speaking of what is embodied—or ensouled—in Prometheus, Eric Havelock says in the introduction to his translation of *Prometheus Bound* (*Prometheus,* University of Washington Press, 1968, cloth, $6.95; paper, $2 45):

> The moral effect of this unification was striking. It prevented the optimism of scientific humanism from degenerating into a sentimental faith or a vague intuitionism. It saved the Greeks from that soupy idealism which dogs modern culture and leaves the mind confused between the claims of the practical versus the moral, between what is realistic and what is right.

Havelock asks:

> Why then should altruism be interpreted as a close relation of science? What right had the Greek mind to visualize the technologically inventive man as also the helper, the benefactor, the "lover"? The answer stems back to an analysis of that effort which extends mental processes at long range into the "forethought," without which science cannot long remain science. . . . The conclusion would seem to be that if man cares to pre-think far enough, his forethought becomes increasingly moral and philanthropic in its direction. Man cannot prethink evil, but only good.
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> This quality of intellectual prevision is dose kin to the scientific imagination, and it needs the patience, the precision and analysis of science to accomplish the stages of forethought; it calls for the discipline of measurement and a large dose of experimental courage. . . .
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> Religion has proposed, in the main, a different formula, which relies for moral action upon the goodness of will and rests goodness of will upon some

> intuitive relationship to God, to whom the will must be subjected. Perhaps, at a certain level, the Promethean and Christian formulas can be reconciled. But if the present age goes in doubt and darkness, if its public policies threaten strife and death, which it brings on itself, it is because it has not accepted the Promethean formula. For only this formula can heal the fatal gulf in our minds between the "practical" and the "ideal." . . . That religious prejudice, which separates the source of moral purpose from the intellect, cripples the range of moral purpose beyond remedy.

Who is the "enemy" in this drama? It is Zeus, who fears loss of control over the conduct of mankind, now that humans have a sense of freedom and know the arts that imagination serves. Zeus wants simple obedience, conformity to his will, not the disorderly spontaneity which the gift of Prometheus is making possible. But Prometheus, through his foresight, knows secrets which Zeus cannot know. And a time will come, the play reveals, when the Titan and the Olympian will be reconciled. But Zeus will not wait for that far-off time. The needs of his power are immediate and allow no compromise:

> Its drive is to hold the allegiance of servitors by present success, which always has to be continued in the successive moments of the present. It cannot postpone an issue, and is therefore prevented from pushing thought from means to ends, and so to further ends. It therefore cannot take in that increasing area of interest, which converts itself into the area of philanthropy, where the forethinking intelligence is in charge.
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> Therefore power always corrupts, and absolute power corrupts absolutely. We commonly say that, when wielded by intelligent men, it may become the instrument of their intelligence, or conversely if we regard powerful men as wicked, we say that their intelligence is made the tool of their will to power. But in the truest sense, a functional relationship between the two does not exist . . . power itself destroys the foundations of power. This is its fatal self-contradiction. It is not a continuing principle, and if it sometimes behaves as though it were, that is because it is mitigated by other processes of the mind.

Plato warned against a science concerned only with "results." He said that men would be blinded by a merely "huckstering" use of mathematics and by the disciplines which can be acquired without inward moral assent. And today we see that Plato was right. In our time the merely technical side of the Promethean vision has been institutionalized, divorced from its ethical inspiration, and made into the tool of a self-perpetuating system. The figures who speak for Zeus in *Prometheus Bound* are now echoed in today's Pentagons of Power.

Havelock asks:

> Does technology become the mind's master instead of its servant? Should it carry the blame for discouraging the practice of long-range thinking in political and practical affairs? Many men, and those the more thoughtful, would say Yes. The opinions of the universities seem to be on their side. These institutions carry the main responsibility for maintaining intellectual man in modern society. They seem to be increasingly aware that as they train men vocationally, which in the broad sense means technologically, they turn out graduates who do not think about what they are doing but just do it. They aim only to earn a living and adjust as painlessly as possible to the accepted social patterns. . . .
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> Modern man has learned the disproportion between himself and his universe and is secretly depressed and defeated by his own insignificance. He retreats and relapses into a half-formulated cynicism, which confines his practical hopes and ambitions to an immediate minute. . . . Even to visualize his life as a whole, from birth to death, and to plan today's living and loving with an eye on the emotional needs of tomorrow, requires an act of faith which the new science of his own utter insignificance has undermined.

For all that may be said against the Greeks—their fickle politics, their lack of emotional control, their preoccupation with external forms of beauty, their practice of slavery, and their cruelty, not only to defeated enemies, but to their own most distinguished citizens—they still maintained a conception of human beings which had in it the possibility of heroic behavior. Whatever misfortunes the Gods might impose, a Greek would never have anticipated, as a modern scientist did quite recently—reflecting on the threat of genetic manipulation—"Instead of a

collection of possibly exalted individuals, we become a blob."

The Greek sense of being confined by destiny might have kept man small, but, as Havelock says, "He remained an *x* in the equation, not a zero." Greek humanism is tragic humanism. The Promethean hero in man may be chained, but he is not finally undone. A cruel "will to power" may be master of his external situation, but Prometheus, who has forethought, will neither cringe in submission nor admit he has done wrong to *think*. Despotism may win the day, but another day will come.

It is the vision of this release which sustains Prometheus throughout his trials, even though, meanwhile, he suffers the pain of frustration and neglect. This compassionate hero who has given himself entirely to the service of man is repaid by isolation. Only a passive, instinctive loyalty to Prometheus is expressed by the mass of mankind, typified by the Chorus in *Prometheus Bound*. His is the martyrdom of mind and vision, born of daring joined with the incompletion and weakness of the age:

> This brings on man a certain loneliness. He is not necessarily a class or type. He can be part of many men; but one which, if they lack Promethean nerve or if they are placed in circumstances where they cannot use intelligence, they conceal in order to be successful. The play at times seems to rise to the level of a moral philosophy of the estate of man. Its actors, with varying degrees of irony or protest, all give witness that philanthropy is not requited, that the benefactor is evilly treated, that pity given wins no pity in return, almost as if this were a historical law. It is not suggested by the victim that his benevolence was mistaken. He nowhere expresses regret for his policies. Rather, the drama seems designed to reconcile the Promethean to carry this burden of non-requital, as if it were a functional element in his task. And this is true. Working in actual history, the Promethean intellect can never be repaid in kind for its services, for if it were, the services would be recognized in the category of the familiar; and its objectives, to be familiar, would have to be short range. They would therefore lose that touch of imaginative science which makes them Promethean.

Here, in mythic terms, is an account of the tension felt by men who seriously seek the heights of self-knowledge, in that shadowy terrain of obstacles and openings, of rational and irrational circumstances, of which the human world is made.

REVIEW
WHAT WILL SHAPE THE FUTURE?

MAINLY because of recollections of some fair-minded things he said during the Vietnam War, while serving as Assistant Secretary of State, we asked for a review copy of Roger Hilsman's book, *The Crouching Future* (Doubleday, 1975, $12.50). Mr. Hilsman begins by discussing how to predict the future, taking as a model Alexis de Tocqueville's *Democracy in America.* He then reviews the ideas of various writers on the future—among them Daniel Bell and Herman Kahn—adding comment and criticism. His title is based on a phrase suggesting that the future is "crouching in the present." How does the future crouch in our present? One sentence in this book of 650 pages gives the author's answer: "Affluence, then, brought about by the cumulative effect of technology, is the dynamic, the future crouching in the present, to which we should pay most attention in searching for clues to the future shape of society in the developed world."

We found this sentence bewildering. If there is anything that seems certain about the future, it is that present-day affluence is not going to last very far into it. How can "affluence" be the dynamic of change? A taste of it, Mr. Hilsman thinks, generates the demand for a better life:

> What will it [affluence] do to traditional values? Junk them, modify them, or transform them completely? What new values will affluence bring? At least some dues to what is happening to traditional values and attitudes, and hints of the nature of those still to emerge are inherent in three recent movements—all of which, I would argue, arise as a result of recent gains in affluence and in anticipation of those to come. What I have in mind are the new militancy of the blacks, especially, but also of Chicanos and the Indians as well, the women's liberation movement, and the turmoil on the college campuses during the late 1960s and early 1970s.

How has affluence generated the "new militancy"? There is this answer: "The time is now because this is the first time that man has achieved enough affluence to implement goals that have been really out of reach, and because this is the first time in the history of mankind that he can see ahead to a time in which he will be relieved of the age-old struggle for mere subsistence and free to pursue a more meaningful life—if only he can discover what a meaningful life is." So far as we can see, Mr. Hilsman means that in some people a little affluence produces insistence on greater equality of opportunity, while to others it gives time to think about new values to replace the old "production-oriented and achievement-oriented values associated with the 'industrial ethic'." Pursuing this point, he says:

> What the student movement seems to sense is the emotional crisis that mankind will have in finding something to put in the place of those outmoded values. What the crisis will bring, in fact, is an almost tragic irony for those who are now struggling for equality. A large element of the equality that blacks and women demand is equality in work opportunity. Yet the affluence that is making equality possible is also going to destroy work opportunity—and do it at just about the time that equality is finally achieved. What the student movement seems to sense and others do not is that the equality they will achieve will be equality in the agony that Keynes foresaw of having to face mankind's "real, his permanent problem." The truth of the matter is that there will be very little work to do, not nearly enough for everyone for very much of their time.

Mr. Hilsman seems unaware of the strong possibility that capital-intensive, technology-oriented society has practically no future at all, and that the only way humans may be able to survive and get along with one another, while keeping the planet healthy and a fit habitation, is by deliberately returning to a labor-oriented, tool-using life. If this happens, there will be plenty of *work.* Perhaps, for a long time, very little else. What then will become of the dynamic of "affluence," if, indeed, it exercises the influence this writer suggests?

Toward the end of the book he does take into consideration changes that will be forced on mankind by the natural limits of the planet:

> The energy crisis of 1973-74 is minor compared to the problems that lie ahead. But it does illustrate the dilemma. The developed countries, even the wealthy United States, cannot really become self-sufficient in petroleum. Yet neither can the industrialized countries leave the power to control their economies, employment levels, and standard of life in the hands of the countries that just happen to produce the oil on which their economies are dependent. It seems inescapable that mankind will find itself again and again confronted in brutal and crude ways . . . with the fact that the only possible solution is a fundamental recasting of the organization of every aspect of mankind's economic, social, and political life.

This author seems to assume that everything that people decide to do will get done only because they are *pushed* to do it. The method of analysis, in short, is mechanistic. Motives result only from external pressures. No doubt environmental necessities will play a large part in the mass follow-through of change, but moral ideas are the effective causal factors in pioneering efforts which set an example. Not affluence, but disgust with its empty values, with the means of its achievement—and with the kind of thinking which has made affluence seem all-important—may be the real dynamic behind *humanizing* change for the better.

For example, Greg Whitten, a man who migrated to a Canadian farm a few years ago, tells (in a Canadian paper) about the decisions he and his family made after they established themselves on the land and had stabilized their personal economy by producing maple syrup and sugar for individual customers and retail outlets. Their present income (which has proved adequate, since nearly go per cent of their food is grown on the farm) amounts to about $1,500 a year. They found they could do without a motor vehicle: "We were so sick of driving, breakdowns, doing repairs, getting poisoned from the gasoline fumes and exhaust and paying money right and left, and so angry at the destruction that is being wrought for, by, and as a result of motor vehicles." Now they have to hitch a ride from time to time, but the net use of motor vehicles is less.

Reviewing other decisions, Greg Whitten muses:

> Nevertheless we seem to be drifting to a more intermediate outlook, becoming reconciled to the fact that we cannot escape or eliminate technology that is all around, and permeates our existence, and we are compromising to a limited use of that technology and its products so that we are not overloaded with work or too cat off from some of the things we love. We decided not to get rid of electricity, got a radio to listen to good music (and every morning, I'm almost ashamed to say, I listen to the weather forecast), we borrow a vehicle more often (and contribute to the cost of its self-destruction) to go to town, haul manure, and go visiting, and hire the neighbor to run our thrashing machine.
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> We have to remember what we have come out of—that we cannot expect to achieve everything at once, that while building a new way of life we still have to relate to the old—that we cannot isolate ourselves and our children from some of the good things or from our friends, parents, and neighbors. Our progress, at this stage, is more relative to the state of society at large that we are inevitably a part of. There is danger in putting too much pressure on ourselves, in trying to go too fast or too far; danger of getting out beyond our depth, getting beyond our capacity for the work and the adaptation, and becoming disillusioned. So we must continue at our own pace and remain within our capabilities.

This voluntary sort of change, paced by capacity, may be prophetic of the mass-movement of tomorrow. Breakdowns in urban life will be a stimulus.

In a section on resources and the environment Mr. Hilsman notes that at present, in the United States, only "about 4 per cent of the population remain on the farm—feeding the whole population and still having surpluses to be sent abroad," but he says nothing about the increasing criticism of large-scale farming, about the spreading interest in the humanist economics of E. F. Schumacher, and he does not recall Jefferson's deep conviction that so long as agriculture is the principal activity of the American people, they will "remain virtuous." He seems to base his hopes on the fact that biologists have lately "solved the genetic code" and may now be able to develop new forms of

plant life, probably in grains, to provide sufficient food for the larger world population of the future.

A main difficulty with this book grows out of its neglect of the new attitudes which are springing up, of the new modes of life being attempted, and of the increasingly spontaneous rejection of both the means and the psychology of "modern progress." Like some other writers on the future, Mr. Hilsman leaves out of account the possibility of a major discontinuity with the historical trend of the past two or three hundred years. Instead, along with present "affluence" as the major influence determining tomorrow's world, he makes economic and technological history the indicator of man's further development:

> Eight thousand years ago came the first agricultural economy; 150 years ago the first industrial economy; and 10 years ago the first service economy. In energy, man depended on his own muscle power for most of the 40,000 years [all, apparently, that Mr. Hilsman allows for the emergence of Homo sapiens]. Animal muscle began to be used 8,000 years ago. Coal first came into use in China 4,000 years ago, and the Greeks and biblical peoples also used it. But it did not come into general use as a source of energy until about 150 years ago. Oil became important only about 100 years ago, and the first nuclear reactor used as a source of power went into operation in England in 1956. In the field of transportation, man traveled on foot at about 3 to 5 miles an hour most of those 40,000 years; 8,000 years ago he started riding horses and camels at speeds of about 10 miles an hour for long distances; 5,000 years ago he invented sailing ships, which got him up to 12 to 14 miles an hour; 150 years ago came the railroad, which eventually reached average speeds of 100 miles an hour; and 75 years ago came the automobile, with average speeds of about 75 miles an hour, except in traffic jams and during periods of fuel shortage! Propeller aircraft for passenger traffic came into general use just over 30 years ago with speeds of about 300 miles per hour, and jet aircraft, with speeds of 600 miles per hour, came into general use just over 15 years ago. The first moon rocket was in 1969, and it had a speed of 18,000 miles per hour.

Books about the future which start out by presenting such figures as "significant"—unless they are cited in evidence of aberration—seem sadly out of touch with the currents of thought and action that have the vision and moral energy capable of inaugurating constructive change.

COMMENTARY
A LARGER AWARENESS

THE themes in this issue converge toward a unity of idea—which wasn't deliberate, but perhaps no accident either. Throughout, the emphasis is on what individuals and small groups can do to start things going in a better direction. The point, variously made, is that nothing else can be expected to work.

What about the "larger problems" involving millions of people? There seem to be a few exceptional individuals with an intuitive understanding of the needs and behavior of large populations—who grasp the possibilities and weaknesses of people in the mass and are able to devise intelligent plans for progress at this level. Such would include great legislators. Examples? Well, Edward Bellamy was perhaps such a man. In his life of Bellamy Arthur Morgan calls him a "social engineer." The expression has an unpleasant ring, today. Nobody wants to be engineered, but Morgan used the term in its best sense.

Unhappily, Bellamy's social dream in *Looking Backward* seems to have been based on the hierarchical structure of the Army, which Bellamy much admired. But that doesn't dispose of his vision. When you turn to constructive influence, you find that many of Bellamy's specific proposals were incorporated into law within fifty or seventy-five years of the time he wrote. Morgan notes this in his book, along with a census of distinguished persons all of whom said their lives had been greatly affected by Bellamy's thinking. We might remember, here, in our disenchanted condition with respect to largescale social theory, that in an interview with the editor of the nineteenth-century liberal journal, *Arena*, Bellamy said: "If I thought socialism would not insure full freedom for the individual and foster intellectual hospitality in the realms of ethical, scientific, and philosophical research, I should be the first to oppose it." Bellamy's inspiration captured the imagination of the American public—it was the ideal of human brotherhood which springs from his pages.

How can we make the thinking of great visionaries in social planning gain practical application? What can we do to keep them from being mere "dreamers"? The rest of us need to take the initial steps in personal and community reorganization, developing the awareness that is naturally hospitable to large-scale social vision.

CHILDREN
. . . and Ourselves
POLITICS AND EDUCATION

A SPECIAL sort of insight is required to say useful things about mass education or *systems* of education. Yet the case for attempting it is simple enough: the great majority of children get what we call their "education" in this way—therefore, we *must* consider the problems of systems.

But discussion at this level soon embarks on enterprises which have little to do with either children or education. It becomes evident that all "mass" issues take on political coloring. Involved are the rights of the powerless, of the underprivileged, of the victims of social and economic injustice. This turns efforts to improve mass education into an attack on human selfishness, as embodied in institutions and habits of everyday life. The selfishness is more or less obvious in its anti-human effects, and angry condemnation is a natural result. Since improving human character is a long and, some say, almost impossible undertaking, selfishness, it is concluded, must be attacked through legislative control.

Bussing has become an issue for the courts to decide, since this has seemed to many a measure necessary to achieving racial integration in the schools. In the *Nation* for July 5, Maurice Ford discusses a recent *National Observer* interview with Prof. James Coleman, author of the (1966) Coleman Report on "Equality of Educational Opportunity." The *Nation* writer helps the reader to see the complexity of the problems involved. Prof. Coleman believes that "social class integration" is indispensable to equality in education. He wants "a majority of middle-class children in each classroom." This is explained in his statement printed in the *National Observer:*

> The theory is that children who themselves may be undisciplined, coming into classrooms that are highly disciplined, would take on the characteristics of their classmates and be governed by the norms of the classrooms. So that the middle-class values would come to govern the integrated classrooms. In that situation, both white and black children would learn. What sometimes happens, however, is that characteristics of the lower-class black classroom, namely a high degree of disorder, come to take over and constitute the values and characteristics of the classroom in the integrated schools. It's very much a function of the proportions of lower-class pupils in the classroom.

We see what Prof. Coleman means, but the language he uses is likely to make the reader uncomfortable. As the *Nation* writer says, some people "may quarrel with the 'middle-class norms' that Coleman espouses." He means that sometimes bussing works backwards, bringing the opposite of the desired result. He points out that whether or not bussing is a good idea depends upon local conditions and how it is done. Sometimes it brings noticeably good results, as many believe has happened in the schools of Pasadena (Calif.), but bussing is not in itself a form of educational righteousness. It is a tool, not a formula for automatic benefits.

The *National Observer* headed its interview: "A Scholar Who Inspired It Says Bussing Backfired." The *Nation* writer finds this headline misleading. What Dr. Coleman said, in addition to what we have quoted, is that he felt his 1966 report on inequality in the schools ought not to have been made the basis for *legal* decisions. As he put it:

> The evidence in my [1966] report is not relevant in any way to the question properly before the courts. The question is whether school systems have acted in a way that deprives students of their constitutional rights. That's a legal question, not a question of achievement levels. I think the courts were wrong to consider the report in any way. It's appropriate for school boards to consider such evidence but not courts.

Here Prof. Coleman is saying that he was and is concerned with learning process, that he doesn't think his research findings should be made into a weapon for social justice. He continues:

> Consider what would have happened if the report had said that segregated classrooms improved pupil performance. Would the courts have been justified in ordering bussing to create racial imbalance? Of course not. Courts are taking a very precarious path when they make research results about the achievement consequences of school integration a basis for reorganizing a school system. That's not their function, in my view.

The *Nation* writer comments:

> James Coleman seems correct to me, at the present time, in emphasizing that desegregation decisions must continue to be made, quite apart from reports like his own. He seems also correct in his skepticism about expecting instant positive results from court-ordered bussing. The task before the courts, North and South, ever since *Brown v. Board of Education*, has been to bring about desegregation (which is preliminary to, and quite different from, integration). The emphasis is on the elimination of a stigma. The courts cannot afford to turn back from this task, particularly given the tentative and conflicted state of our social science knowledge. Coleman emphasizes that courts must continue to march forward and undo the discrimination which official action has brought about.
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> Very few civil rights advocates are surprised that test scores do not substantially improve, or racial attitudes markedly change, during an initial period of desegregation such as is now taking place in Boston. Indeed, given the level of violence and tension in schools like South Boston High and Hyde Park High, it would be a miracle if test scores did not go down and stereotyped attitudes become more fixed in these initial stages. The hope is not so much for the present. It is, after all, only the first step, albeit a step which must be made. The hope is that, perhaps twelve years from now, when the present turmoil has subsided, black and white kindergarten children and first-graders will begin to go to school together in peace and begin to love and respect each other and to appreciate each other's diverse talents and contributions.

In other words, educational and humanistic goals sought by political and legislative means are not actually realized, except in form, which may be empty, until the uncoerced and uncoercible qualities which humans long for in one another voluntarily come into being. The best way to look at even Supreme Court decisions was suggested by Christopher Stone in *Should Trees Have Standing:*

> . . . the Court may be at its best not in its work of handing down decrees, but at the very task that is called for: of summoning up from the human spirit the kindest and most generous and worthy ideas that abound there, giving them shape and reality and legitimacy. Witness the School Desegregation Cases which, more importantly than to integrate the schools (assuming they did), awakened us to moral needs which, when made visible, could not be denied.

Political criticism, since it deals with mass problems, inevitably tends to become institutional criticism. As a result, its content is almost exclusively statistical, neglecting the small, often imperceptible "molecular" changes through which genuine reform and alteration of attitudes gradually get under way. When criticism becomes *restricted* to the political mode, it excites divisiveness and indignation, in time becoming a barrier to any sort of growth. We may learn from the intrusion upon our lives of macro-problems (resulting in demonstrations, school strikes and disorders) that our institutions have gone wrong, but there is always a strong possibility that the solutions do not lie at the macro-level.

A comment on the present failures of college education, in the same issue of the *Nation*, illustrates this point. Barbara Damrosch remarks in a review of two books about professors: "Between the people on the bottom (entering students) and the people on top (trustees, regents) there is often an agreement that college is a track that leads to money. But in the classroom, theoretically, anything can happen. And sometimes remarkable things do."

These "remarkable things" are not accessible to political or legislative control.

(But see *The Third Side of the Desk* by Hannah Hess for an account of a parent movement for school reform which grew out of a teachers' strike in New York City.)

FRONTIERS

The Responsibility of People

WE have been reading (and writing) about the "energy crisis" for just about four years—ever since, in MANAS for Sept. 1, 1971, we reviewed John Wilford's series of *New York Times* articles on the subject, taking off from the fact that for three straight summers New Yorkers had lived "under the daily threat of power brownouts, blackouts, and possible electricity rationing." Wilford pointed out that if the trend of increasing consumption of energy continued, Americans—who are 6 per cent of the world's population but consume 35 per cent of the world's energy output—would be using four times as much electrical and other energy by the year 2000. Then he asked:

> But will the trend continue? Can it? Should it? And if it does not, do you risk economic stagnation, unemployment, even a decline in national power vis-a-vis the rest of the world? Can you accept the psychological wrench of living in a nation with its foot off the accelerator, after two centuries of vigorous and glorified growth?

He quoted John List, a Cal Tech teacher of engineering, who said:

> We've got about 20 years in which to reorganize. Population growth hardly comes into it at all. It's growth in per capita consumption. It's just plain affluence. The only way out of it is to curb the energy consumption per person. Not exactly a no-growth situation, but slow it down from this 9 per cent (growth rate) madness.

Since these brief expressions of simple common sense, millions of words have been written on the problem of energy. The common sense has been repeated ad infinitum. The conditions under which energy sources alternative to fossil fuels and nuclear reactors would become practicable have been described by scores of competent writers and researchers, but hardly anyone is content, or even mildly encouraged, with the steps taken toward fundamental change. It is not too much to say that while various programs of constructive action have been formulated by knowledgeable conservationists, hardly anything worth talking about has happened.

In a foreword to a new book by Amory Lovins and John Price, *Nonnuclear Futures: The Case for an Ethical Energy Strategy* (to be published toward the end of the year by Friends of the Earth), David Brower puts the matter briefly:

> Call it the environmental crisis or the energy crisis, the ingredients are the same. Nations are floundering for solutions. Finite resources have been spent as if there were no future to worry about. Suddenly the future has arrived, accompanied by shortages, inflationary pressures, and unemployment. . . . In the United States, therefore, leaders in government, the energy industries, and such labor leaders as are too close to them join in advocating a course of Strength Through Exhaustion. The US, vulnerable to the whims of foreign suppliers, wants to solve its problems by using up energy faster still. It proposes to invest vast sums of talent and capital on this nonsolution and threatens the suppliers as well. Its concurrent nonsolution to the problem of dependence on OPEC for oil is to exhaust the last US reserves, onshore and offshore, and to commission supertankers, superports, and super-refineries so as to use up OPEC oil faster too. The third US nonsolution is to solve the problem of fossil-fuel exhaustion by taking assorted short cuts toward a nuclear future, letting safety depend upon faith, hope, and charity—faith that technology can carry on where miracles leave off, hope that no one will suffer if other public needs are sidetracked, and unprecedented charity toward the over-extended atomic industrial complex.

What Mr. Brower is really saying is that *nations* are entities which cannot possibly act intelligently—do what ought to be done. Nations are institutions which bring to a focus all the mistakes and weaknesses of a society that has organized and "developed" itself into an impossible situation. Outrage at such manifest impotence may be natural, but the question remains: What can and should be done—by *anybody?* If their composition and habits doom nations to fail in the solution of such problems, on whom does responsibility fall? We are obliged to admit that it falls on nobody at all so long as people believe that only "nations" are able to deal with such enormous undertakings. The first step,

then, quite obviously, is to cut the problem up into parts that can be handled by individuals and resolute groups.

According to Amory Lovins, the time for decision is now upon us. In the introduction to *Nonnuclear Futures*, he says:

> Two main policy paths for the rich countries are now rapidly diverging, and we must jump for one or the other. The first is high-energy, nuclear, centralized, and electric. The second is lower-energy, fission-free, decentralized, less electrified, softer-technology, based on energy income.
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> If we choose the first of these paths, we shall have to continue spending on fast breeder reactors money and skills that could instead develop all the nonnuclear options, especially the soft ones, to commercial usefulness, so they will not get developed. They are really an option only if we recognize them now. It is true that they take much time and money to develop and deploy. But nuclear power requires so much time and money that the softer policy leads to the same place, or rather, to a nicer place, at similar or better rates and costs.
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> The more modest scale and technical complexity of the soft energy options makes them much quicker in principle to demonstrate and build than the huge high-technology devices on which we now rely: for example, scaling up a fast breeder reactor to commercial size requires several stages, each of which is likely to take about a decade and billions of dollars, whereas if the basic building block is an assembly of selective-black solar panels perhaps the size of a house roof, the corresponding numbers are likelier to be a few months and thousands of dollars.
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> . . . the comparatively simple, low-technology, decentralized, non-electrical energy technologies make the most sense. These technologies are small-scale. What matters, though is not aggregate or even unit energy production, but ability to meet the energy needs of people in particular circumstances. Indeed, the energy technologies that most people in the world need are those which perform basic end-uses such as heating, cooking, lighting and pumping; and these can be done admirably by simple devices based on sun, wind, and organic conversion.

Mr. Lovins seems completely right. Moreover, the energy technologies which, he says, "most people need" are the kind that individuals and small groups can put into operation. Getting going along these lines will change the scale of our economic lives to humanly manageable proportions. "Nations" are simply unable to do this. They can help only by getting out of the way.