

SPECIES OF COMMON SENSE

IT is a dictate of human experience, and therefore of common sense, that some people do some things very well. This is the ground for asserting that knowledge exists. The people who do things well know how to do them, and to know is to possess knowledge. This being the case, it was natural for Francis Bacon to instruct his contemporaries of the seventeenth century that the main business of human beings is to get more knowledge, in order to do more things well. Bacon was himself not a scientist, but he embodied and taught the scientific spirit, its inspiration being found in his rule, "Knowledge is power." A later version or consequence of this rule is the credo of all scientists as scientists: "Know-how is the highest good."

Today this credo is subject to dispute. For obvious reasons a great many critics of science are saying, "It is more important to know what is good to do, than to master the skills of doing." They say this on both technical and moral grounds. It applies technically, we could say, to the making of tools and machines. The more versatile they are, the better. So judgment as to use becomes important. Flexible means of production proves in the long run to be far better than great efficiency in making only one thing or part of a thing. The moral application concerned with what is well to do was briefly made by Lewis Mumford, who said:

Whatever the advantage of a highly organized system of mechanical production, based on non-human sources of power—and, as everyone recognizes, there are many advantages—the system itself tends to grow more rigid, more unadaptable, more dehumanized in proportion to the increase in its automation and in its extrusion of the worker from the process of production.

Or, as Charles Reich put it in 1970 in *The Greening of America*, "To have just one value is to be a machine."

The crucial word in Mr. Mumford's paragraph is "dehumanized," which means "divested of human qualities." When do we feel most "dehumanized"? This happens when our decision-making capacity is frustrated. The power to choose is reduced when our field of action is limited to performance of one operation on an assembly line, or when, by reason of color or other racial characteristic, we are denied access to work involving comprehensive responsibility. But not all dehumanization is the result of the actions of others: extreme self-indulgence renders the capacity to choose for ourselves ineffectual. A strong sense of guilt or shame may produce the same result. And sometimes the feeling and expression of contempt by someone in a position of authority is sufficient to unman its object, although an opposite response in the form of cool rejection of the contempt, with measured self-assertion, may also be the reaction. Commenting, some years ago, on the intellectually impoverished curriculum for black students in Arkansas, a young woman said, it's as if "the world didn't think we had minds."

Loss of freedom, then—freedom to do what we are able to do—is the most evident form of dehumanization. But now a great irony appears. It is that a major influence of the scientific movement has been the belief that the feeling of human freedom is a delusion, that we are not free at all, but are entirely shaped by the forces of heredity and environment. We are made, that is, by outside influences and only *think* we have a hand in the processes of our own becoming. This, at any rate, is the view and teaching of mechanistic scientists (not all scientists) who hold that what humans are and do is the result of physical and chemical laws: *we don't do anything; we don't really exist, except as sites where the determining influences are focused.* Books have

been written to support this contention. In *Chance and Necessity*, Jacques Monod declared that the scientific method denies that there is any purpose in nature or in the life of humans, since science recognizes only what is "objective," and purpose, which is choice, is not only subjective but metaphysical in structure. And years ago, in *Science and Human Behavior*, B. F. Skinner, behaviorist psychologist at Harvard, wrote:

The hypothesis that man is not free is essential to the application of scientific method to the study of human behavior. The free inner man who is held responsible for the behavior of the external biological organism is only a prescientific substitute for the kinds of causes which are discovered in a scientific analysis. All these causes lie *outside* the individual.

Fortunately, the ordinary human of common sense does not think about himself in this way, and would probably regard the claims of Monod and Skinner as insane, if they happened to come across them. For the average person, the world of science is a world of words, having little or no relation to the affairs of life. For him, freedom to decide what he will do next is the natural condition of his day-today action.

But what is freedom? We don't think about "being free" when we are busy at something. If an obstacle is encountered—say, on the road—we go around it, or wait a couple of days until it is removed. The free life, you could say, amounts to a career in avoiding, going around, or overcoming obstacles, and our freedom consists in being able to choose the best route. In fact, it seems clear that freedom has meaning only in a framework of limits. A man who could do anything he pleased, never being prevented by opposing circumstances or barriers, would be a man who didn't know *anything*, because there would be nothing "out there" that he is required to study and know.

Does it matter, then, what scientists like Monod and psychologists like Skinner say? It matters because the world of words and theories exercises a wide influence, although mostly an indirect influence, on ordinary people. It is natural, say, for persons of common sense to

recognize that there are areas of meaning they do not understand very well, and to seek for help in places of the higher learning. If you want to know something about a particular part or aspect of the world, you go to the university where knowledge is stored. Or you send your children there to obtain an education. You may even hope that they will develop an interest in "philosophy" and be led to inquire into the meaning of life. But there they are likely to be told that science has not discovered any meaning, beyond the simple drive toward "survival," and that Purpose is not a question into which scientists inquire. Writing in 1943 in *The Need for Roots*, Simone Weil spoke of the specialization in learning which deprives the student "both of contact with this world and, at the same time, of any window opening onto the world beyond."

Nowadays a man can belong to so-called cultured circles without, on the one hand, having any sort of conception about human destiny or, on the other hand, being aware, for example, that all the constellations are not visible at all seasons of the year. A lot of people think that a little school boy of the present day who goes to primary school knows more than Pythagoras did, simply because he can repeat parrotwise that the earth moves around the sun. In actual fact he no longer looks up at the heavens. This sun about which they talk to him hasn't, for him, the slightest connection with the one he can see. He is severed from the universe surrounding him, just as little Polynesians are severed from their past by being forced to repeat, "Our ancestors, the Gauls, had fair hair."

A more pointed discussion of the issue of free will was presented by Douglas Clyde Mackintosh (of Yale) in the *Journal of Philosophy* for Jan. 18, 1940. He told of a doctoral thesis in which the candidate could discover no rational basis for responsibility in human conduct, since if people actually make no decisions or choices for themselves, how can they be held responsible? Yet this candidate was seeking a Ph.D.! One of the examiners addressed some verses to the young man:

Here's a question; if you can, sir
Please supply a simple answer.

Was your novel dissertation
 Product of predestination,
 Result of native drive and knowledge
 Effect of home and school and college?
 Why, if so, should you have credit,
 Even though your name may head it?
 Why not graduate some actor
 Who died ere you became a factor?
 If, however, no causation
 Accounts in full for its creation,
 Why should you be made a doctor,
 And not some other don or proctor?

On the other side of the ledger is the life of Clarence Darrow, a convinced mechanist in philosophy, from which he apparently decided that people are simply not responsible for what they do, this being the result of their environment' so that he devoted his remarkable talents to the defense in court of poor and wretched individuals charged with crimes.

Actually, quite a case can be made for what the psychologists call "conditioning" as an explanation of what people do, and an entire school of psychology, based on Pavlov's experiments with dogs, developed in support of the contention that human beings are altogether shaped by environmental influences. For many years this psychological outlook, called Behaviorism (the term adopted by John B. Watson, American founder of the school), dominated psychological thinking in Western thought, rivalling psychoanalysis in influence. Commenting twenty years ago, the humanistic psychologist, Carl Rogers, said:

We can choose to use our growing knowledge to enslave people in ways never dreamed of before, depersonalizing them, controlling them by means so carefully selected that they will perhaps never be aware of their loss of personhood. We can choose to utilize our scientific knowledge to make men necessarily happy, well-behaved, and productive, as Dr. Skinner suggests. . . . If we choose to utilize our scientific knowledge to free men, then it will demand that we live openly and frankly with the great paradox of the behavioral sciences. We will recognize that behavior, when examined scientifically, is surely best understood as determined by prior causation. This is the great fact of science.

But responsible personal choice, which is the most essential element in being a person, which is the core of experience in psychotherapy, which exists prior to any scientific endeavor, is an equally prominent fact in our lives.

Why, one may wonder, is it so difficult to "live openly and frankly with the great paradox of the behavioral sciences"? One reason would be that we find ourselves confronted with two possibilities: we can either try to extend the area of "responsible personal choice," or to reduce it. For example, most adults accept their responsibility for the "bread-winning" activity of the family. They work in order to provide the young and themselves with shelter and nourishment. But there are also those who accept responsibility for the welfare of the community. We call them "public-spirited," and in years past honored them as patriots. Another extension is the concern shared by a growing number of individuals—world food supply—who work to reduce the number of people who suffer from hunger and malnutrition. Then there is the responsibility assumed by the educator, spoken of by Hannah Arendt in *Between Past and Future*:

Insofar as the child is not yet acquainted with the world, he must be gradually introduced to it; insofar as he is new, care must be taken that this new thing comes to fruition in relation to the world as it is. In any case, however, the educators here stand in relation to the young as representatives of the world for which they must assume responsibility although they themselves did not make it, and even though they may, secretly or openly, wish it were other than it is. This responsibility is not arbitrarily imposed upon educators it is implicit in the fact that the young are introduced by adults into a continuously changing world.

This responsibility, obviously, is continuously difficult, even painful, for the one who accepts it. How much easier to transfer the obligation to explain and in some measure to correct manifestly bad relationships to forces outside our control! Here one recalls the bank robber who, brought before the judge for sentencing, said "I come from a broken home." Or the economist who explains that food cannot be *given* away on a large scale to

starving populations because of the upset of market conditions that would result. To accept responsibility is to open oneself to the pressure of the moral "ought," and in a world as confused and filled with the unexpected as ours, this is a burden of which the doctrine of self-interest as the law of life can free us.

But this, the teachers and sages of all time have declared is the human situation. The decision, then, is between attempting to become a Promethean or rationalizing escape from responsibility. There is, moreover, the penalty exacted of the would-be prometheans by society, which is largely made up of persons dominated by self-interest. The situation is as Eric Havelock says in his essay, *Prometheus* (University of Washington Press, 1968). Speaking of the Promethean individual, he says:

Every time he attempts a fresh effort of foresight he risks offense to the established chain of command in society. He is more easily forgiven if he restricts his powers to the task of predicting the behavior of physical matter. If he extends this to the science of man, he sets up an automatic malaise in the machine of society, and provokes active distrust and antagonism from those who enjoy operating it. . . . 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.

Are we, today, in a better position to consider the Promethean choice? Is the feeling of personal responsibility beginning to assert itself with greater insistence than in both the long-term and immediate past? By reason of the prevailing or popular philosophy, in the past our lives have been mainly an attempt to avoid responsibility. The Greeks blamed their wrong-doing on the gods, while the Christians held the Devil responsible, or, among the Calvinists, God (indirectly), too. After the nineteenth-century revolutions in thought, Darwin's naked apes were made the source of the drives and contradictions of human nature, with

considerable assistance from dark Freudian factors. Yet today a variety of humanistic psychologists have been groping toward restoration of the dignity of man as a choosing responsible being. Their ideas begin with the proposition: We are responsible for ourselves—which leads, if accepted, to gradual enlargement of responsibility. This tendency in modern thought—and it seems fair to call it a heroic tendency—began for Americans in the nineteenth century, and while Emerson and Thoreau should have much of the credit for this beginning, the founder of American psychology, William James, is also an originating figure. If the twentieth-century schools of psychology had listened to him, they might have avoided much wandering in the dark of materialistic assumption and mechanistic causation. We can, if we will, go back to him now, finding this decision an easier one in view of the inadequacies and failure of a psychology which insists that there is really no such thing as a choosing and willing human being.

Like virtually all great men who choose the Promethean path, James had his ordeal on Mt. Caucasus, or his Gethsemane. At about twenty-seven he suffered, his biographers tell us, "a prolonged period of depression and melancholy." He was haunted by suicidal tendencies and "felt himself no different from the epileptic idiot he had chanced to see in a mental hospital." In his introduction to Tames's *Psychology: The Briefer Course* (Harper, 1967), Gordon Allport says: "It is a striking fact that he dates his recovery from the moment he decided to subscribe to the doctrine of freedom." (Could, one wonders, a civilization find recovery by the same means?) In April, 1870, James wrote in his diary:

I think yesterday was a crisis in my life. I finished the first part of Renouvier's second *Essais* and see no reason why his definition of free will—"the sustaining of a thought *because I choose to* when I might have other thoughts"—need be the definition of an illusion. My first act of free will shall be to believe in free will.

Allport comments:

James did not hold this solution lightly. The issue vexed him all his life long, for he saw clearly the counter argument—that since natural science finds every event in the physical universe to be causally determined, then—if it be a science—psychology should assume that every thought and act are similarly determined. And yet James knew that even the psychologist, while denying freedom, half believes in it, and almost always acts as if it were true. Otherwise there would be no place for praise or blame in life, and no ground for human morals. To resolve the issue James makes a tentative case for at least a limited form of freedom, "the power to keep the selected idea uppermost." While James desires with all his heart to be a scientist he refuses to accept presuppositions that run counter to the totality of human experience. . . .

In contrast to many contemporary psychologists James does not stop with an examination of the mechanical routine of human behavior. He gives an equal place to the capabilities of growth and discovery. In reading present-day psychology one often gains the impression that man is wholly a prisoner of his past learning, that he is somehow finished and done for. In reading James one feels that man is just beginning. . . .

James warns psychologists that by their own theories of human nature they have the power of elevating or degrading the same nature. Debasing assumptions debase the mind generous assumptions exalt the mind. His own assumptions were always the most generous possible. . . . Much psychology today is written in terms of *reaction*, little in terms of *becoming*. James would say that a balance is needed, but that only by assuming that man has the capacity for growth are we likely to discover the scope of the same capacity.

We are now culturally free to adopt the position declared a century ago by William James. The shadows of religious bigotry and scientific dogmatism are constantly lessening. Yet our problems, constantly lessening. Yet our problems, brought forward from a past generated in the darkness of anti-human habits, are multiplying, also from day to day. Only free individuals who believe and know they are free will be able to cope with these problems. We can choose.

REVIEW

A MIRROR AND MAGNIFIER

CHANGE is in the air—for the better, one hopes, along with the various bad things that seem likely to happen—and the signs are numerous. Specifically, in the area of serious thinking about the world, its processes and meaning, the epoch of uncompromising materialistic assumption is passing away. For a variety of reasons, the quest for "reality" is no longer assumed to require that what happens be always a result of unintelligent forces brought to bear on atoms, molecular structures, and living organisms. The presence of *mind* in the universe, while still an unaccountable mystery, is increasingly acknowledged to be a factor in causation, although of uncertain and largely unknown extent. Terms such as "soul" and "transcendence" are slowly gaining the substance of meaning, although definitions in this area may be properly vague. In various ways, what we speak of as "idealism" is having its innings, and stress on the ethical responsibility of humans no longer seems dreamy and unrealistic.

This is a basic change in the climate of opinion, in the motive and direction of inquiry. The question raised in an essay by Jerome Bruner, quoted recently in these pages, seems an apt summary of the spirit of the times. In effect, he asks: What is worthy of us as a species?

The book we have for review, *Anatomy of Reality* (Columbia University Press, 1983, \$16.95), by Jonas Salk, scientist and physician of note, is an excellent example of this trend, and also of its strength. Your reviewer is of the opinion that the movement of thought here represented should be taken seriously, even though an activity of the imagination may be required to do so. Dr. Salk is himself convinced of this need; his sense of an emerging enlightenment is the theme of his book; and if we take the work of so distinguished a scientist to typify the intellectual and moral temper of the present, it becomes reasonable to call the present

an age of awakening, comparable to the rush of progress that occurred in Europe during the sixteenth century, on the plane of scientific discovery. We are speaking of the time briefly but well characterized by Will Durant in his *Story of Philosophy*:

The awakening began with Roger Bacon (d. 1294); it grew with the limitless Leonardo (1452-1519); it reached its fulness in the astronomy of Copernicus (1473-1543) and Galileo (1564-1642), in the researches of Gilbert (1544-1603) in magnetism and electricity, of Vesalius (1514-1564) in anatomy, and of Harvey (1578-1657) on the circulation of the blood. As knowledge grew, fear decreased; men thought less of worshiping the unknown, and more of overcoming it. Every vital spirit was lifted up with a new confidence; barriers were broken down; there was no bound now to what man might do.

This was the time when Gutenberg's invention had spread throughout the Western world, when cheap paper began to come from Egypt, leading to publication of books in substantial quantity. As Durant says, the printed word "broke out like a liberated explosive," spreading everywhere the impact of new ideas.

We are now on the verge, Dr. Salk thinks—in the face of ominously threatening events with what seem no comparison in history—of an awakening of another kind. He writes to generate a sense of reality for this change:

The ideas in this volume arise from my feeling that there is need for a simplified way of seeing the importance of the human mind in evolution. As human beings, we are enmeshed in the process of evolution as active, and not merely passive, participants. The emergence of the human mind has brought about our involvement by giving us a capacity to anticipate and react to our circumstances in a way unique among species. The mind makes it possible for us to reflect upon the cosmos; it may even be said to *reflect* the cosmos, a sentient mirror which gives us a way of seeing all that had gone before us in the course of existence. The human mind also enables us to imagine possibilities that might develop in the course of future evolution, and moreover to influence the direction of this process.

We thus have a profound responsibility in the continued evolution of the human species. . . . At this

time, it seems prudent merely to draw attention to what is happening, in a way which does not take too firm a directional position, yet is based upon a recognition of the hard realities with which we are confronted.

The central theme of this volume is that, if we are informed about what is happening in our age and about options that face us, then, as individuals as well as members of the organism of human kind, we may be able to choose the most evolutionarily advantageous path. This idea is based upon the assumption that, either because of genetic determination or through intellectual intuitional development, a sufficient number of human beings now exist who, as individuals, are impelled to counter the self-destructive and devolutionary influences in our society and in the world.

In short, the book is an act of faith.

Yet the faith has a ground. For Dr. Salk, it is based upon his personal experience in the ways of knowing—both scientific and human. The method is in some sense the same, although the fields are different in the way that scientific fact and human possibility are different. Dr. Salk has become convinced by his scientific practice of the reality of intuition. It is possible, he believes, to know basic things spontaneously, which may then be confirmed and amplified by reason. Intuition is something like a compass by which the course of a vessel is guided. You need a ship to go anywhere on the sea, so we develop reason-planned and technology-devised vessels for this travel. But not even an experienced mariner would go to sea without the compass. This is the collaboration between intuition and reason that Dr. Salk proposes: these powers of mind are as real for him as the steps on the sidewalk leading to his house, and as necessary for being human as the air he breathes and the food he eats. Reading him is a good experience, not for agreeing with his conclusions, however sensible and appealing they may be, but for recognizing a deliberate use of the mind that could become common practice—consciously. No doubt we use this method without noticing; he wants it to be deliberately undertaken. He explains how he has gone about it:

I do not remember exactly at what point I began to apply this way of examining my experience, but very early in my life I would imagine myself in the position of the object in which I was interested. Later, when I became a scientist, I would picture myself as a virus, or as a cancer cell, for example, and try to sense what it would be like to be either. . . .

When I started to ask larger questions about the human world, it came naturally to me to play the same kind of game. I soon found myself shifting my perspective, as I did in my relation to my scientific work, from that of the participating subject to that of the objective observer. When I began to look at myself and at conditions of human life, I sought a perspective from outside myself and outside the "here and now," as well as from within. I needed a different and broader perspective. . . . I soon found that this system worked as well in trying to understand human experience as it did with experiences in nature. . . .

In this way I could manage to solve problems more easily because I could look at the problem from the viewpoint of subject and object at one and the same time. I found myself at one with the object, or with the subject, and I could even project myself in time, through my imagination, and bring to realization intentions or imaginings as if they had become self-fulfilling prophecies. I then imagined that it may be possible, through empathy and intention, to influence the future course of human events in the same way that we can influence the course of human events through the use of the scientific and artistic imagination. I recognized the importance and value of the mind and the value of the game of empathetically shifting perspective in dealing with human problems as well as unraveling the mysteries of nature. If the human mind can do one, it should be able to do the other.

There are, we might say, two theories of truth, and Dr. Salk is familiar with both, but is now primarily engaged with the second theory. The first is the "correspondence" theory. You look at an object from all sides, weigh it, draw it, test it for content and structure, and then describe it, making what you say correspond as closely as possible with the object itself. The second theory is that of becoming in mind what you want to know. This is indeed another order of knowledge, vaguely suggested by the kind of knowing that grows out of love. You know what you love in

ways that transcend mere description, simply because there is a sense in which we become what we love. Using his imagination, Dr. Salk practiced the "becoming" theory, and he gained solid confidence in it through tangible result and the processes of verification that reason and experiment supply. He has a sense of discovery from his experience and wrote his book to convey it to readers.

This makes the book a personal one, it could be said. He is telling about *his* subjective and objective experiences. Yet if, on the other hand, his work reveals a natural capacity of all humans—a largely undeveloped capacity, yet real enough—then the work has an impersonal aspect, even a scientific aspect, using this term in a wider sense.

The mind, he proposes, is able to deal with metaphysical reality—subjective reality—just as it has the power to arrive at valid conclusions concerning the facts and laws of physical nature. This open and avowed attempt to enter the realm of metaphysics—to consider its structures and modes and laws as *real*—may be a great stride of progress in the intellectual evolution of the human race. It is certainly a dramatic departure from conventional scientific thinking. This makes Dr. Salk's book an important invitation to thinking about ourselves and our potentialities. We conclude by quoting a paragraph from one of the last chapters:

We need mirrors and magnifiers, we need to develop new ways of seeing and of recognizing ourselves. Consciousness of self and consciousness of the new reality are both necessary, and both are of the highest value for survival and evolution. They are essential for adaptation to the new reality. If we are to increase self-actualization and self-realization, self-awareness becomes an essential tool, allowing greater adaptation and wider effectiveness in dealing with and influencing the course of human experience.

COMMENTARY

WHAT WE LACK

TOWARD the end of 1982 Jonas and Peter Salk presented a paper, "An Evolutionary Approach to World Problems," before a Paris meeting of UNESCO. Since the themes of this paper are largely taken from the book considered in this week's Review—*Anatomy of Reality*, by Jonas Salk—some attention to the questions raised seems in order. After speaking of cosmic and biological evolution, the writers say:

The next phase of evolution, the one with which we are now primarily concerned, may be called "metabiological evolution": the evolution of the human mind and the products of the human mind, on both an individual and a collective basis. This phase of evolution concerns the development of our ways of thinking, our philosophies, religions, writings, science, culture, the whole of our society and social forms, in all of their diverse expressions.

What, it may be asked, stands in the way of development of this sort? In reply, the Salks say:

What we appear to lack is not the intelligence to discover new ways of making use of and controlling nature, but the wisdom to utilize our newly developed knowledge appropriately. Thus, we are still left with widespread suffering in the face of knowledge and technologies that appear capable, if used wisely, of alleviating many of the current problems of mankind.

What are the bases for these problems of the mind, this apparent lack of wisdom? One source of these problems appears to be an insufficient expression of certain qualities which we possess: insufficient generosity, insufficient respect for the rights and lives of others, insufficient concern for nature and the environment, insufficient development of a perspective which includes all of humankind as opposed to merely one's own self, one's family, one's community, or one's nation. Another source of these problems appears to be an over-sufficient expression of certain other desires attributes and characteristics which we possess: desire to preserve and expand one's sphere of life itself (self, family, community, nation) independent of the effect on others, desire to obtain more wealth and power, the orientation to compete to acquire the most for oneself at the expense of others, the orientation that in the game of life some will be winners and others losers.

Seldom are the moral issues of human life presented with such clarity. How are the excesses to be converted into the needed sufficiencies? We have one suggestion: Study the lives of individuals who are distinguished for having done precisely this. Biography may prove far more informing and encouraging than history.

CHILDREN

. . . and Ourselves

THE SOURCES OF "MODERNISM"

THE Sophists, according to Werner Jaeger—who also has some friendly words about them—"lived by their wits." He makes the type a familiar one, saying in *Paideia*:

They strongly resemble the *literati* of the Renaissance both in their intellectual arrogance and in their independence, their untrammelled cosmopolitanism. Hippias of Elis, who was conversant with every branch of knowledge, who had learnt all trades, who wore no garment or ornament which he had not made himself, was a perfect *uomo universale*. There were others too who so deftly and dazzlingly combined the functions of scholar and orator, teacher and *literateur* that it is impossible to place them in any one of the traditional professions. . . .

The whole age was moving towards individualism, and they were in the van of the movement: so that their contemporaries were right to regard them as the true representatives of the spirit of their age. Another sign of the times is that the sophists lived on their culture. It was, says Plato, "imported" like a marketable commodity and put on sale.

In our day, the think-tank experts—including such eminent opinion-makers as the late Herman Kahn—certainly qualify as sophists, as do many of the professors in the multiversities of the time. Their great invention, Jaeger says, was rhetoric, the use of rhetoric being to win arguments, not to know the truth. Lawyers are the well-paid rhetoricians of the present.

There is a sense in which the Sophists were the authors of all that is "modern" in modern civilization. This is clear from what Jaeger says:

The sophists have been described as the founders of educational science. They did indeed found pedagogy, and even today intellectual culture largely follows the path they marked out. But it is still an open question whether pedagogy is a science or an art, and they themselves called their art and theory of education *techne*, an art, not a science. In Plato we have a detailed account of Protagoras' views on the subject; for although his report of the great

sophist's speech and behavior is humorously exaggerated, it must be true in essentials. Protagoras, then, called his profession "the political *techne*" because it was to teach political arete. (Virtue.) And this belief that education was a special art is only another example of the general tendency of that epoch to divide life up into a number of special activities, each with its own purpose clearly in view and its theory established, and each covered by a particular body of knowledge which could be transmitted by education. There were specialists and specialized technical publications in the various branches of mathematics, in medicine, gymnastics, musical theory, dramatic technique, and so forth; even artists, such as Polyclitus, were beginning to write about the theory of their subject.

The sophists, it seems, originated specialties in education, which in our time become the branches of the sciences. On them, then, we may blame the obscurantism of the private vocabularies used by specialists. The general reader, if he is to understand books by modern sophists, must take time off to master their private languages, and much of the time what you learn hardly seems worth the effort. Meanwhile, some of their terms "catch on," becoming the jargon of fashionable speech.

The Greek sophists were also the great relativists of their time. Jaeger asks:

Are religious skepticism and indifference, and moral and metaphysical "relativism," which Plato opposed so bitterly and which made him a fierce and lifelong opponent of the sophists, essential elements of humanism?. . . . We can at least say this in anticipation. Before the sophists, there was none of the modern distinction between culture and religion in ancient Greek education: it was deeply rooted in religious faith. The rift between the two first opened in the age of the sophists, which was also the period in which the ideal of culture was first consciously formulated. Protagoras' assertion that the traditional values of life were all relative, and his resigned acceptance of the insolubility of all the enigmas of religion, were without doubt intimately connected with his high ideal of culture. . . . Education always needs a standard, and at that period, when the traditional standards were dissolving and passing away, it chose as its standard the *form* of man: it became formal.

How shall we choose? Do we want a religious foundation for life and society, and are we ready to endure what seems the inevitable bigotry and thought-control which take charge when the going gets rough; or do we want the relativism which celebrates a value-free freedom, a convictionless life which finds responding to impulse the highest good?

Freedom and truth ought to be one; but in the kinds of societies we develop, they are at war. Yet Jaeger maintains that there is a Humanism which includes both:

But it is quite as essential a feature of humanism that, formal as it may be at any moment, it always looks forward and backward, beyond itself—backward to the rich religious and moral forces of historical tradition, as the true "spirit" from which the intellectual concept of rationalism, empty to the point of abstraction, must derive its concrete and living content; and forward to the religious and philosophical problem of a concept of life which surrounds and protects humanity like a tender root, but also gives it back the fertile soil in which to grow. This is the fundamental problem of all education: our answer to it will determine our judgment of the importance of the sophists.

These quotations from Werner Jaeger are taken from his three-volume work, *Padeia—The Ideals of Greek Culture*, maintained in print by the Oxford University Press.

The lines of thought which focus on education are without limit. Here are some of the reflections of the Iranian architect, Nader Khalili, during his early days as a graduate student in California:

I take my car and head back to the shore, where the Pacific Ocean has everything—soft sand, clear water, big waves, and rocky edges. I take off my shoes and walk in the sand at the rim of the water. The lights of the small artists' town are reflected in the water, and I enjoy the chill in my feet. A wonderful thought comes to my mind, and I start expanding it as I walk: loneliness—as an art, not as a social sickness, not as a disease with many side effects.

Loneliness has been the reason behind the creation of many masterpieces of art and literature,

but compared to the general picture of lonely people and their miseries, these are only exceptional cases. We have missed seeing this most important of human conditions as a talent, as an inward concentration to be used *for*, rather than against, a human's well-being.

We teach, from kindergarten through the universities, all sorts of useful lessons to children. Reading, writing, arithmetic and hundreds of other subjects are taught in schools, to be used on small occasions in life, but no occasion occurs as often as the occasion for a person to be alone. And yet we haven't developed any teaching for it. If we teach our children what I call the "lone art," then human life, alone or in society, will be quite different at many levels and ages from what it is today. Every day a child should learn how to be comfortably, even happily, alone to better his "lone art" education, and once he has learned, not only will he not run away from being alone but he may also enjoy creating something in that period.

If taught in a school, the "lone art" classes must be more typical of the spaces people use in daily life. Individual students attending a space alone will think, create, or simply daydream, and then will write, tell, share the experience with others. Students will have the choice of pursuing the "lone art," and like the arts of painting, writing, and music, new masterpieces may be created for others to emulate. And as the child grows into youth and then moves into adulthood and finally old age, he will know what to do with his "lone art" ability just as he knows what to do with his reading or writing or walking ability. (From *Racing Alone*, Harper & Row, 1983.)

It seems necessary to add, however, that no more than for Jaeger's ideal humanism, can a "curriculum" be prepared for this sort of education. Only the teacher's imagination and sensibility will guide the activity from moment to moment, using vision rather than a "plan."

FRONTIERS Gaia and Her Followers

FROM time to time we name here the journals which are concerned with the remaking of the world closer to the heart's desire—journals such as *Rain*, issued in Oregon, the publications of the New Alchemy Institute on Cape Cod, those of *Ecology Action*, now of Willits, California, and the *Land Report* issued by the Land Institute of Salina, Kansas. These are magazines, books, and pamphlets devoted to ways of thinking and acting on the land in cooperation with nature. They are critical in relation to present prevailing practice, but generally affirmative in content, dealing with what can be done, now, although against the grain of the times, to create a better future for all.

Historically speaking, far-reaching changes always begin with the work and effort of a few pioneers. These individuals are at once students, even scholars and scientists, and at the same time actors who put their ideas to work, demonstrating as well as arguing for the modes of change. By such means, fields of new understanding are generated and spread their influence. These fields come into being because of the labors of human beings who think naturally in terms of the common good and common needs. They are promethean in the sense that they have foresight, studying the present as an expression of the law of cause and effect, confirming their predictions through practical experiment and carrying on educational activities by the means available to them, and inventing fresh means by imaginative daring.

A magazine published in England has been doing this work for thirteen years—*The Ecologist*, edited by Edward Goldsmith, Nicholas Hilyard, and Peter Bunyard, now four times a year. (American subscriptions cost \$28.00, single copies £2. The address is Worthyvale Manor Farm, Camelford, Cornwall PL32 9TT. UK.) The magazine catapulted to comparative fame with publication, in January, 1972, of *A Blueprint for*

Survival, a compact presentation by a number of writers, including scientists, beginning with the assertion that "if current trends are allowed to persist, the breakdown of society and the irreversible disruption of the life-support systems on this planet, possibly by the end of the century, certainly within the lifetime of our children, are inevitable."

Speaking of the future, when fossil fuels will be practically used up, the *Blueprint* said:

Small farms run by teams with specialized knowledge of ecology, entomology, botany, etc., will then be the rule and indeed individual small-holdings could become extremely productive suppliers of eggs, fruit and vegetables in neighborhoods. Thus a much more diversified urban-rural mix will not only be possible but because of the need to reduce the transportation costs of returning domestic sewage to the land, desirable.

The units of industry will of necessity become small and decentralized:

Industry can completely fulfill its new role only in harmony with particular communities, so that the unreal distinction between men and employees and men as neighbors can be abandoned, and jobs then be given on the basis that work must be provided by the community for the sake of that community's stability and not because one group wishes to profit from another group's labor or capital as the case may be. As industry decentralizes, so will the rest of society. The creation of communities will come from the combination of industrial change and a conscious drive to restructure society.

Each issue of *The Ecologist* is filled with responsible ecological report, review, and criticism, much of the material of popular interest as well as being scientifically reliable. (We speak, of course, of the new spirit in scientific inquiry, which is now making science a department in the Humanities.) In the combined issues of 2 and 3 of volume thirteen (1983), there are articles on the extensive cultural background of the Gaia Hypothesis of James E. Lovelock, starting with the views of Greek religion, science, and philosophy; on the breakdown of the economic case for nuclear power; on the exploitive threat of

the economic invasion of Antarctica; on the high production (with little waste) of the traditional agriculture of India. Among the shorter articles is a comprehensive account of Permaculture, the movement established in Tasmania by Bill Mollison, and now spreading around the world, and a pleasantly informing discussion of what Henry David Thoreau could be expected to say in opposition to nuclear energy.

The impressive thing about the material appearing in the *Ecologist* is that, after you have read it, you have the feeling that at last you really know something about the subject treated. This is especially true of "Gala: An Ancient View of our Planet," by J. Donald Hughes. There is much in this review of ancient faiths that rings with resonances in harmony with present-day feeling and aspiration. Past teaching and belief seem a confirmation of today's longings and inward reflections. We quote from the conclusion of these scholarly and informing seven pages:

First, the earth is the oldest goddess, supporter and nurturer of her children, human and non-human, and therefore entitled to respect and worship. Her principles of justice, personified as her daughter and alter ego Themis, are deeper and more compelling than human enactments because they are written in the soil and rocks, are heard in the rain and winds, and have their inexorable effects without need for courts and juries beyond the land and crops themselves. Environmental problems are seen as a result of the failure of human beings properly to worship the Earth and follow her unwritten laws.

Second, the Earth is a living being of whom humans are only part. Right relationship with the Earth means that the total organism is in good health; so environmental problems are seen as illness, as a failure of one part of the organism to interact supportively with others.

Third, Earth is seen as responsive to human care or lack of it, giving rich returns to those who treat her well and punishing those who are lazy or who weary her by trying to wrest from her what she is not ready to give. Environmental problems are seen as passionless revenge of Earth on those who fail, either through ignorance or avarice, to practice well the art of the attentive tender of the land. "For Earth is a goddess and teaches justice to those who can learn,

for the better she is served, the more things she gives in return."

"The modern scientists who have advanced the Gaia hypothesis," Donald Hughes suggests, "undoubtedly were not aware of how far back in intellectual history the antecedents of their theory can be traced."