

WHAT SORT OF AWAKENING?

THERE is one dawning realization now going on which seems more important than any other feeling or discovery that belongs to our time. It is that knowledge, when it really is knowledge, relates to ourselves and is to be used by ourselves. The simple fact that so many are no longer shy about using the expression "self-knowledge" is enough to give this idea more content than a platitude. The vast tumult of "protest" against every sort of external system may be understood as a deep and growing rejection by humans of being obliged to think of themselves as objects, as "things"—as having neither the capacity nor means of control over their own lives.

Controlling one's own life is no easy attainment. Short of ancient metaphysical systems, we are entirely lacking in a structured theory of limits and possibilities concerning the control of our lives. The relation of the individual to the larger whole—all the various "wholes"—remains a mystery. Whether or not life has a "purpose" has either no answer or too many answers. The present-day confusion in both psychology and religion may be explained in this way, since confusion is not so much the result of mere ignorance as of aimlessness. Ignorance is part of the human condition. Knowledge represents the partial conquest of ignorance, while wisdom is the capacity to use what knowledge we have in coping with ignorance.

But we do know that people wholly persuaded that they cannot control their own lives will not even attempt to do so. It is reasonable to think that only a relative control—or freedom—can be reached by human beings; and reasonable, also, to admit that we have a great deal to learn about the rules for being free; but it outrages us to the core to be told, or for it to seem, that we can have *no hope* of being free, no expectation of running our own lives. Hence the rising protest at multiple levels of human expression.

This struggle is far more than a phase of the contest between science and religion. Except for the minority representation in Christianity of a few

mystics, Western religion has not allowed human beings the possibility of true control over their own lives—that is, *obedience* has been of much greater importance than rational understanding in Christian teaching. Various champions of rational understanding were excommunicated, through the centuries, by religious authority, and the most effective ones were burned at the stake. It was only after the established religion of the West had lost its authority to Science that humanistic currents of thinking became clearly noticeable in Christian thought. From a rational point of view, the Will of God was fully as arbitrary as the Lucretian concourse of atoms, while the latter had at least the advantage of being free of divine malice. Both postulate an external order of control, and, sooner or later, resistance movements get under way. That greatest of nineteenth-century psychologists, Dostoevsky, put the case against spiritual tyranny in unanswerable terms in his legend of the Grand Inquisitor in *The Brothers Karamazov*, and in *Notes from Underground* he made an equivalent reply to the behavior-modifiers who manage material Utopias:

You Gentlemen have taken your whole register of human advantages from the averages of statistical figures and politico-economic formulas. . . . Shower upon man every earthly blessing, drown him in a sea of happiness, so that nothing but bubbles of bliss can be seen on the surface; give him economic prosperity such that he should have nothing else to do but sleep, eat cakes, and busy himself with the continuation of his species, and even then, out of sheer ingratitude, sheer spite, man would play you some nasty trick. He would even risk his cakes and would desire the most fatal rubbish, the most *uneconomical* absurdity, simply to introduce into all this positive good sense his final fantastic element . . . simply to prove to himself—as though that were necessary—that men are still men and not the keys of a piano. . . . The whole work of man really seems to consist in nothing but proving to himself that he is a man and not a piano key.

What, fundamentally, is the resistance against? The evidence from history is clear. Human beings find it intolerable to be defined—decisively defined—in the terms of some isolated, finite, limiting component of their being. The rise of the materialistic philosophy, and of social doctrines based on it, was plainly a rejection of the conception of man as a sinner—an offender against the system of theological definitions of good and evil. The moral energy behind the scientific movement of the Enlightenment came from the powerful feeling and assertion that, whatever "sin" may be, man is much more than a sinner. He is a being who can learn for himself from experience and observation. He can achieve more reliable certainties, make more inclusive definitions than the dubious abstractions of theology. From this point of view, the claims of science were formed as a polemic against dogmatic religion. Bertrand Russell put the matter well in his Introduction to Lange's *History of Materialism*:

Historically, we may regard materialism as a system of dogma set up to combat orthodox dogma. As a rule, the materialistic dogma has not been set up by men who loved dogma, but by men who felt that nothing less definite would enable them to fight the dogmas they disliked.

Russell is also the source of a succinct statement of the new dogmas set up by scientists to abolish the oppressive religious claims. Again we are given a set of abstractions about nature and man (instead of about God and man) which make human beings creatures of external forces beyond their control. As Russell wrote in *A Free Man's Worship*:

That Man is the product of causes which had no prevision of the end they were achieving; that his origin, his growth, his hopes and fears, his loves and beliefs, are but the outcome of accidental collocations of atoms, that no fire, no heroism, no intensity of thought and feeling, can preserve an individual life beyond the grave; that all the labours of the ages, all the devotion, all the inspiration, all the noonday brightness of human genius, are destined to extinction in the vast death of the solar system, and that the whole temple of Man's achievement must inevitably be buried beneath the debris of a universe in ruins—all these things, if not quite beyond dispute, are yet so nearly certain, that no philosophy which rejects them can hope to stand.

That was written seventy-one years ago, and it has taken some time to free ourselves from grateful loyalty to these aggressive scientific abstractions which destroyed the foundations of the old theological definitions. By reason of this loyalty, the first attack on science was oblique, based on naked moral intuition. The Existentialists declared that no matter *what* the physicists and biologists say, Man is a Responsible being. Don't tell me, cried Sartre, you didn't ask to be born: You *are* born! And you must act like a man by reason of the indefinable "something" within you. But this bleak stoicism, without the rich support of pantheistic feeling known to Marcus Aurelius and Epictetus, could appeal to only the most tough-minded heroes of our time. The rest of us want a universe, if not "friendly," at least compatible with our deep intuitions about the world as well as ourselves. It is not enough to declare the reality of human freedom and the moral sense; we want, also, a basis for thinking that our lives have meaning, that our relations with the world are leading to some higher fulfillment, some enduring growth. So, today, we are in the midst of a vast process of redefining both ourselves and the world.

Just as the initiative in making definitions was seized and torn away from the theologians by the scientists, so this initiative has again been grasped by a diversely talented company of rebels—and fortunately so, since the wide variety of new conceptions of man and nature helps to prevent institutionalization of the revolt and the early formation of new dogmas. Some of the rebels have been and are themselves scientists or philosophers of science. In 1928 Arthur Eddington made this austere declaration: "We have seen how in the physical world the meaning is greatly changed when we contemplate it as surveyed from without instead of, as it essentially must be, from within." Then in 1939 he added (in *Philosophy of Physical Science*): "A scientist should recognize in his philosophy—as he already recognizes in his propaganda—that for the ultimate justification of his activity it is necessary to look, away from the knowledge itself, to a striving in man's nature, not to be justified of science or reason, for it is itself the justification of science, or reason, of art, of conduct."

Man, in short, is not a "thing," but the maker, the measure, the originator and definer. In more recent years Michael Polanyi has developed a man-centered theory of knowledge which may soon become the new scientific epistemology. But reforms in the philosophy of science have but small impact on the thinking of many of the people who twist restlessly in the grip of psycho-social assumptions based on nineteenth-century mechanistic science—the assumptions so generally stated by Russell in 1903. "Power to the People" is more than a deceptive slogan of radical politics: it speaks to inchoate longing in individuals as well. Hence the extraordinary popularity of Carlos Castaneda's books on the Yaqui sorcerer, don Juan. The powers of the Mexican magician are doubtless what sell Castaneda's books, but the broad cultural significance of this trend lies in the hunger of people for a return of the *locus* of power to human beings. The base of reality in these books is the consciousness in man—which makes or defines all the lesser realities, all the finite appearances which come and go. Whether or not it is true that the dons Juan and Genaro danced around Castaneda in their astral bodies is not the essential question: the lasting effect of his books may be in terms of how we look at the universe and ourselves, and of where we look for "authority" concerning what to believe about such matters. As a *Harper's* editor muses, introducing a section from Castaneda's latest, *Tales of Power* (September *Harper's*): believability is an issue which gives way to the "much larger controversy" concerning the basic change in human attitudes. This change is described by Robert Ornstein in *The Psychology of Consciousness*: "In many related areas of thought, such as philosophy, psychology, physics, and medicine, the dominant concepts of the past fifty years are beginning to break down at the edges." Castaneda's books are cited as an example.

Such books, it seems, provide the hammer blows of change. They are decisive but coarse in effect, and the moral influence they exercise—in some ways don Juan has little more than a *machismo* ethic—remains to be seen. The transformation of attitudes is evident at many levels. In literature, for example, the renewed interest in Carlyle, after

almost a century of contemptuous rejection of his "heroic" theory of history, is another aspect of the return of power to human beings. Discussing a new book on Carlyle (in the *New York Review of Books* for June 27), Noel Annan says that Carlyle's problem was to understand how, after revolution, the organic growth of a new society could be fostered and led. Uninspired parliamentary government was hardly the way:

The answer came to Carlyle through his notion, so hated by us . . . that history can be seen as the history of great men as well as the movement of impersonal forces. The true hero does not lash the mob into submission, nor does he rely on the slavish adulation of flunkies and valets. The true hero awakens the latent heroism in his followers. To the six types of hero which Carlyle identified in his famous lectures, there should be added a seventh—regenerated man himself.

Increasingly, we become aware that for the world and ourselves to have *meaning*, we must begin to think at levels to which the conceptual vocabulary of science does not relate. You can talk about how to make a bridge or a rocket or a bomb in scientific language, but not about the synthesis of a good life for man. As a contemporary thinker has said, having to use scientific language for such problems or objectives is like having to force "a roomful of rich information through a small knot-hole to another great expanse of eager receptivity." The scientific abstractions, so fruitful in both discovery and amplification of our physical powers, have turned into a narrowing Procrustean vise. Writing on "Communicating Holistic Insights" in *Fields Within Fields* (V, I, 1972), R. F. Rhyne said:

We *know* (from watching athletes, hearing symphonies, driving autos, making love) that humans readily can sense subtle differences within half-sensed, infinitely complex situations. The capacity to receive is there, as it has been for millions of years of unfolding human evolution. The messages to be sent—the fields to be described and the differences to be sensed—have grown more and more complex. The prosaic link between them still is only as wide as one small bit of data.

This is a critique of dead language—the passive, unambiguous language fit for describing dead matter and formulating blind laws ("The very

first assumption of any scientist is that the stuff he is studying is incapable of thinking for itself"), but totally inadequate to deal with other levels of reality, of which there are many. It is a language fine for the statement of Newton's laws, but worse than useless, because so misleading, for numerous other purposes. Identifying prose as the "natural" language of science, Mr. Rhyne says:

A noun is a powerless thing, and any definition can be imposed on it. Prose has sometimes been identified as lacking in rhythm, rhyme, or beauty, such definitions fail in normal usage, but semantic bases of distinction prove to be more serviceable. We here take two factors to be definitive. *First*, prose consists of propositions having only one meaning and composed of symbols, each with just one definition; each prosaic proposition should be testable for truth on generally positivist grounds, and an equation (with its terms defined) is an archetypal example. *Second*, prose is sequential, working point-to-point along a chain of assertions or questions. It treats one molecule of meaning at a time.

We should note that a language with various shades of meaning is not necessarily "inexact." Ancient systems of symbolism are said to have contained a plurality of levels of meaning, each having its own sort of exactitude, a precision appropriate to the distinctive content and meaning of that level. But for those who imagine that only the prose concerned with physical objectivity can be a precise language, the many-leveled language must seem a careless, hit-or-miss mode of communication. Hence Jacob Bronowski's opinion, given by his spokesman in "The Abacus and the Rose," is that the non-scientist's response to nature is "a strangled, unformed and unfounded experience," while "science is a base for [that experience] which constantly renews the experience and gives it a coherent meaning." But what if the coherence is only coherence by reduction, by exclusion? By careful suppression of all those last questions through which human beings struggle to understand themselves?

Mr. Rhyne says:

Prose certainly is ill-fitted even to describe a picture. It is as though a near-sighted inch-worm sought randomly to traverse the Mona Lisa and to then produce from summed facts a comprehension of

the whole. The prognosis of such an effort would be very poor, for many reasons. The linear traverses may miss some crucially important bits; the worm (or prosaic researcher) may remember selectively, bound by preconceptions as to the overall pattern or hampered by forgetfulness within some ten-year scanning; with all the bits at hand, the *picture* still may not be seen.

But what of the claims for the systematic symbologies of the ancients? Are they not mere speculation and emotional glorification of the past? Perhaps so, but we have to admit that "the past" grows daily in majesty and authority, in comparison with the present. Meanwhile, Giorgio de Santillana, who teaches history and philosophy at MIT, has remarked in *Hamlet's Mill* that a "great worldwide archaic construction" of knowledge was in existence before the Greeks came upon the scene, and that threads and fragments of this knowledge survive in misunderstood myths and fairy tales. The Pythagorean tradition was an expression of that ancient "gnosis," repeated in the language of archaic myth, and from this source we have much of the foundation of modern civilization. From it we have the beginnings of mathematics and such words as "theory," "theorem," and "philosophy," as well as the doctrine that the world is formed according to number. Behind Plato's myths, de Santillana maintains, was his knowledge of the ancient system, and Plato used this language in his allegories—"without divulging their precise meaning: whoever was entitled to the knowledge of the proper terminology would understand him."

In a paper in *Daedalus* (Summer, 1974), "Science, Knowledge, and Gnosis," Theodore Roszak examines this question more exhaustively. How might a scientist fit himself to understand the language of myth and ancient symbol? Not alone by fortunate initiation, for this sort of knowledge requires more than the hearsay of instruction. even if the instruction is by the wise:

. . . we might imagine an entire specialization in science devoted to studying the nature poets and painters: biologists sprinkling their research with quotations from Wordsworth or Goethe . . . neophyte botanists taking required courses in landscape painting . . . astronomers drawing hypotheses from

Van Gogh's "Starry Night". . . . Of course, nothing forbids scientists from wandering in these exotic realms, but what curriculum *requires* that they do so?

The common charge of the hard-heads of science is that myth is careless of facts. The reply is, Not so; the ancients gave attention to facts, but only to the extent necessary for eliciting meaning. The proportions were balanced for their time. All meaning and no facts is fantasy, while all facts and no meaning is what we have today, as "modern knowledge," an inhumanly closed system against which is ranged the present massive revolt. Roszak speaks to this point:

If, in the past, gnosis has been more heavily weighted on the side of meaning than information, it should not be difficult to understand why. Our ancestors saw fit to put first things first. Before they felt the need to know how fire burns or how seeds germinate, they needed to know the place and purpose of their own strange existence in the universe. And this they found generously offered to them in the nature of things. Yet, I know of no visionary tradition that has ever refused to agree that natural objects possess a structure and a function worthy of study. Certainly none of these traditions has been as adamantly closed to the technical level of knowledge as our science has been closed to gnosis. Plato may have wanted the mind to rise to a level of ecstatic illumination, but he never said there was no such thing as information or that its pursuit was a sign of madness or intellectual incompetence. Similarly, the alchemists may have sought their spiritual regeneration in natural phenomena, but they never refused to examine the way nature works. Undeniably, where gnosis becomes our standard of knowledge, science and technology proceed at a much slower rate than the wild pace we accept (or suffer with) as normal. This is not to say, however, that gnosis is without its practical aspect, but rather that its sense of practicality embraces spirit as well as body, the need for psychic as much as for physical sustenance.

Always the question comes—How shall we *know*?—which is tortured prose for asking, How can we survive without proper authorities? Who will set standards for the ignorant and beginning scholars? What shall we use for "controls" until we are all self-managed and reliably self-instructed beings?

The question is fundamental. Usually, it comes too late. Yet it should be plain enough that we need a moral order for our lives before we make much progress in the direction of individual power and control. It is for this reason, no doubt, that in the teachings of the Buddha, the ethical takes precedence over the acquisition of powers. The service of others, the purification of desire, the elimination of selfishness, come first for the greatest of the teachers of mankind. Would anyone seriously want to exchange a world filled with half-taught Yaqui magicians for even our world of self-satisfied and convention-bound technologists—intriguing as the idea may be? Or prefer a planetary archipelago of communes managed by self-preoccupied followers of Gurdjieff? Issues of "reality" are not involved here so much as the welfare of the human race—its need for the heroic service of a Prometheus, the self-sacrifice of a Christ, the universal compassion of a Buddha.

Meanwhile, the great resistance is progressing, the new ideas of man and nature are taking root, and the soil of inward discovery is becoming fertile again. It is much that we are trying to take command of our own lives, and finding good and sufficient reasons for thinking that we can and should. But, gaining command, what then will we *do* with our lives? Will we elaborate a more sophisticated hedonism, and start making all the old mistakes again, this time at a higher and more lethal level? Or will we, long before reaching the summit of independent decision, think deeply on what should be our meaning *for* the world?

REVIEW

PSYCHOLOGY'S LOST CHORD

MICHAEL POLANYI has for years been conducting both a vigorous defense and a searching criticism of scientific inquiry. The criticism is part of the defense, since he works to restore to science a grasp of its moral foundations in the nature of man. In its early days, he shows, science was a powerful force for moral as well as practical good.

It was only when the philosophy of the Enlightenment had weakened the intellectual authority of the Christian churches that Christian aspirations spilled over into man's secular thoughts, and vastly intensified our moral demands on society. The shattering of ecclesiastical control may have been morally damaging in the long run, but its early effect was to raise the standards of social morality.

What is more, scientific skepticism smoothly cooperated at first with the new passions for social betterment. By battling against established authority, skepticism cleared the way for political freedom and humanitarian reforms. Throughout the nineteenth century, scientific rationalism inspired social and moral changes that have improved almost every human relationship, both private and public, throughout Western civilization. Indeed, ever since the French Revolution, and up to our own days, scientific rationalism has been a major influence toward intellectual, moral, and social progress. (*The Tacit Dimension*.)

What then happened? Without taking the time to examine the growing popular distrust of science today, we may say, following Polanyi, that the Cartesian and Lockean assumptions of scientific method—to the effect that objective methods and critical reason are alone competent to accumulate all the knowledge we need—as their implications were developed, they changed radically the conception of the human being and ignored the intuitive and moral foundations of human motivation. In time, a point was reached at which scientific theory no longer left any "man" in the human being—there was no responsible moral agent, no consciously independent decision-

maker. As B. F. Skinner put it years ago in *Science and Human Behavior*:

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 pre-scientific substitute for the kinds of causes which are discovered in a scientific analysis. All these causes lie *outside* the individual.

From this it follows that the scientific study of man—of human behavior—has been overwhelmingly of the kind which attempts to find out what man can be *made to do* by means of "outside causes." There has been virtually no attempt to reveal his stature and capacities as an independent thinker and "chooser." For such researchers, quite plainly, "self-discipline" is a contradiction in terms, and self-knowledge a meaningless phrase. With this view of man, as Polanyi shows (in *The Tacit Dimension*), there can be no logical restraint on the champions of manipulative social theory. The union of scientific skepticism with the passions of ideology "produces political teachings which sanction the total suppression of the individual."

The nature of the human being is thus the essential issue of our time. Polanyi's work has its greatest importance in his showing that conscience and moral responsibility lie at the root of all scientific knowledge. His demonstration of this is in historical and sociological terms. Are there other approaches to the question?

In *Frontiers* for May 8, we quoted an *American Scholar* (Spring) article by Wilder Penfield, distinguished Canadian neurosurgeon, who said that his researches had obliged him to distinguish between brain and mind. While the mind has access to the body through the complex mechanisms of the brain, mind has an energy of its own—an energy different from that of neuronal potentials. The brain-mechanism or automaton "is incapable of thrilling to the beauty of a sunset or of experiencing contentment, happiness, love, compassion." These, he says, are functions of the mind, "which reasons and understands"—which

can "make decisions and put them into effect by calling on various brain mechanisms." The mind, he says, "must be viewed as a basic element in itself."

We now have through the courtesy of a reader a copy of a paper on this same question by an American physician, Howard B. Miller—"The Process of Thought" (*British Journal of Clinical Hypnotism*, 3, 1, 1972). It will be recalled that David Hume's denial of an inner "self"—which became the defining negative assumption of modern psychology—was based on his claim that whenever he sought "himself" by introspection he came upon only a train of flitting, ephemeral images. Mankind, he concluded, "are nothing but a bundle of perceptions which succeed each other with an inconceivable rapidity, and which are in a perpetual flux and movement." This is the famous "bundle" theory of human consciousness. No "self" at all. Suggesting a similar introspection, Dr. Miller speaks of the inevitable parade of images, then says:

Suddenly you may be aware that although your eyes are closed it is exactly as if you were watching an internal movie screen. If this is so, then *who is looking*—"who is the observer?" Who is this viewer, critic and analyser of this inner stream of consciousness?

Obviously this internal observer, in order to be able to view and study these images, must be something more than we have believed. This inner "observer-thinking" unit of ourselves is what I am referring to as the "Unit of Pure Thought."

Dr. Miller gives directions for a project in "self-discovery" which anyone can pursue. His essential point is the difference between the observer and what is observed. Pure thought, or "the thinker," has an identity independent of sense-imagery, thought-imagery, and even particular thoughts which may be altered or exchanged. He writes:

I cannot say where this "Unit of Pure Thought" resides, but to recognize its existence is essential to a more complete understanding of the structure of man.

It seems that we were distracted from noticing this phenomenon because of the tendency we all have of identifying *ourselves* with the brain (mind) images. Believing these pictures, words, and feelings to be our "thoughts" and therefore our "selves," we missed the distinction that was to be drawn *between the imaged being observed and the observer*. . . .

When the "Unit of Pure Thought" does assume command, there can be a distinct change in your whole life, for then you are under control and can, if you want to, alter the inner landscape of your mind. You can then bring your inner and outer life into closer focus and synchronization.

This outlook has had ancient as well as modern advocates. Plato's conception of education is based on it (see Eric Havelock's *Preface to Plato*), and Maslow's psychology implies similar assumptions (see *Toward a Psychology of Being* for discussion of self-actualization, the peak experience, and his paper on "Health as Transcendence of Environment"). A closely reasoned account of this inner human being, using somewhat the same terms, may be found in the work of a nineteenth-century psychologist and philosopher, George T. Ladd (Yale), who wrote in *The Elements of Physiological Psychology*:

Mental faculties are not entities that have an existence of themselves . . . They are the modes of behavior in consciousness of the mind. And the very nature of the classifying acts which lead to their being distinguished, is explicable only on the assumption that a Real being called Mind exists, and is to be distinguished from the real beings known as the physical molecules of the brain's nervous mass. . . . On the whole, the history of each individual's experiences is such as requires the assumption that a real unit-being (a Mind) is undergoing a process of development, in relation to the changing condition or evolution of the brain, and yet in accordance with a nature and laws of its own.

This, surely, is the "lost chord" of both science and psychology, enabling us to see why so much of science-based activity has turned counter-productive when not increasingly anti-human.

COMMENTARY

FROM INFORMATION TO MEANING

A FAIR-MINDED report of Theodore Roszak's *Dædalus* article (see lead, p. 7) appeared in *Science* for Sept. 13. The writer, Nicholas Wade, notes that Roszak finds "the objectivity of scientific inquiry" not just a convenient tool of research, but "an ingrained philosophical attitude, cold, depersonalized, and spirit-sapping, which dehumanizes science and indeed aridifies Western civilization itself, since the scientific view of reality has succeeded in ousting all others." The report continues:

In his *Dædalus* article, Roszak goes on to say that the trouble with science is that it provides only information about the world, without the meaning. Real knowledge, which Roszak calls "gnosis," avoids the Cartesian *apartheid* which science has imposed on itself and seeks the "meaningfulness of things which science has been unable to find as an objective feature of nature."

Gnosis is an older and larger kind of knowledge, from which, by an impoverishment of the sensibilities over the last three centuries, science has been derived. Ironically Roszak notes, the scientific revolution of the 16th and 17th centuries was launched by men such as Copernicus, Kepler, and Newton, whose thought was steeped in the mystical, as well as scientific, branches of gnosis. "Our science, having cut itself adrift from gnosis, contents itself to move along the behavioral surface of the real—measuring . . . but never penetrating to the visionary possibilities of experience."

Another *Dædalus* contributor, Steven Weinberg, a Harvard physicist, wonders "what he as a scientist is expected by Roszak to do." Nicholas Wade gives Roszak's partial reply:

Roszak then spells out what he wants done. Have scientists never noticed, he asks, "how the lay public hangs upon . . . professions of wonder and ultimate belief, seemingly drawn to them with even more fascination than to the great discoveries?" People want more from science than fact and theory. They want to know the meaning of their existence, "not out of childish weakness of mind, but because we sense . . . that it is there, a truth that belongs to us and completes our condition."

It is perhaps asking too much of Roszak to oblige him to tell scientists exactly how to change their thinking. They must make their own rules. But at the outset the most useful step would be for them to make it clear that empirical, objective science looks only at the outside world of effects. The causal or noumenal world remains beyond the sphere of present scientific investigation. A further admission of value would suggest that a very different methodology is required for study of the realm of meaning—an approach which begins with unembarrassed philosophical assumptions.

CHILDREN ... and Ourselves CERTAIN PUZZLES

YEARS and years ago, on first reading *Peaks and Lamas* by Marco Pallis, we kept wondering what a Marxist-Leninist would decide to do if he parachuted down to the Tibetan countryside and took a good look at the socio-political system of that theocratically ruled land. Pallis devoted many pages to the lives of the peasants, who seemed to be the most priest-ridden and poorest, yet at the same time among the happiest, most cheerful, and artistically productive, people on earth. From the Western revolutionary point of view, the Tibetans ought to be miserable, oppressed, and rebellious. But they weren't. Their homes, while exceedingly simple, were delightful places to visit; beautifully crafted objects were all about. They worked hard yet enjoyed life. The children were gay and playful, the adults friendly and honest, the lives of all pursued in dignity. Yet this Tibetan culture thrived in a social setting that was by Western definition the most "reactionary" and superstition-darkened in the world.

Well, the wondering took us no further than Hamlet's almost complacent comment: "There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy." The Marxist-Leninist would find that there was really nothing for him to do, in terms of the diagnoses he knew how to make and the tools he was trained to use. Maybe he would just take up silversmithing, at which the Tibetans were good.

Now we have what seems a similar contrast between another radical theory and a particular social situation. The radical theory emerges in the perspective of an article by Barbara Wainrib in the Summer issue of the *Journal of Humanistic Psychology*. Here she writes in criticism of an earlier article by K. Kasten which charged Abraham Maslow with "male chauvinism." Barbara Wainrib defends Maslow's insights, then says:

Kasten's interpretation of Maslow's descriptions of creativity are just as biased as any sex-role stereotype. A truly fulfilled individual, whether male or female, should be free to choose the media of his or her own creative expression. When Kasten assumes that a woman cannot be fulfilled if she elects a "housewife and mother role," she is stereotyping in the manner which she criticizes. Liberating women must allow us the freedom to choose. Unfortunately, because of the need to correct an archaic and defeatist female role, the overzealous have thrown out the baby with the bathwater.

Although Ashley Montagu (1970) correctly describes the present state of motherhood as the only job for which unskilled labor may apply, it is nevertheless crucial to survival. Certainly those women who have developed a flair for creative motherhood should be highly encouraged. In fact, theirs could be considered a high-status specialized profession. They should not be made to feel inadequate because they are not storming the barricades of revolution. Kasten refers to "the cliché of creative fulfilled femininity ... i.e., ... the wife and mother role." I fear that this is rapidly being replaced by the new cliché of the non-wife, non-mother as the *only* creative and fulfilled female.

Clearly, no psychotherapy, feminist or otherwise, is a "solution" for many of our dilemmas. It is merely the attempt of our society to inject artificial nutrients into the neat, flavorless, but uniform slices of white bread it has created for industry's mechanical toasters. When our children are born, they are beautifully spontaneous, creative, responsive, human beings—truly whole grain flour. But with great care, we remove all their natural nutrients by subjecting them to our educational systems in preparation for a mechanized, vacuous existence in our society. Occasionally, administrators of schools and industry become concerned with the quality of their product and they hire "experts" in human relations, psychotherapy, etc., to assure that the slices of white bread are enriched—artificially, of course. But we are all contributors to a system which destroys individuality and authenticity. We must not deny our anger. Rather, we must convert it into energy for universal social change. Our goal, however, must be a society in which we can be "less male less female, and more human."

In this case the "radical theory" is to get rid of or reduce the "wife and mother role" for women—not just make it "optional." Child-care

is coming to be regarded as a backward cultural inheritance from the dark ages.

One of Barbara Wainrib's points seems to be that the traditional "male" roles are no more "creative" than those of women, but continuing the discussion in that direction won't lift it high enough out of the framework of familiar assumptions. The contrast we have in mind for this purpose is supplied by Laurens van der Post. In *A Story Like the Wind* (Morrow, 1972), he describes the upbringing of children in a Matabele (Zulu) village, as seen through the eyes of a European lad, François, who has the good fortune to be loved and practically adopted by the tribal chief, 'Bamuthi.

In this world from the moment a child could walk, the only school was one of practical work according to capacity. After sunset it was one of imaginative recital of colorful stories, myths, legends and the lip-to-lip history of the Bantu peoples. Any failure on the part of a child to fulfil his share of duty in this prescribed pattern of tribal behaviour was severely punished by 'Bamuthi and his wife.

In fact François was often amazed that 'Bamuthi who was so obviously a man of feeling could also be so ruthless when a mere child in his kraal did not measure up to his idea of tribal etiquette and expectation. Little as François had seen of the world of his own people outside, he had seen enough to realise how ludicrous were its conceptions of Bantu life and how vast the ignorance on which they were based. There was no nuance of life in the kraal that was not determined by tribal etiquette; every child knew exactly how it was expected to behave towards older people; how to conduct itself at meal times; how to respect the belongings and dignity of others. The overwhelming importance of courtesy, cleanliness, self-respect and constant work was reinforced in them by a routine of order and orderliness. The Matabele wife, like 'Bamuthi's, set the example, above all by treating the smaller children with the utmost consideration; and sharing whatever came their way with everyone else.

This sharing applied as much to hard work as it did to the humble gifts of the bush. François, indeed, was always amazed to find on his visits to the kraal, that ever since dawn each little black boy and girl had already been hard at work. The smaller ones who had only just learned to walk would be looking after the babies, since their mothers, who were the hardest

worked of all, would be away tilling the fields. Their elder brothers were out herding and protecting the cattle, sheep and goats. The older girls would be busy cleaning the kraal, sweeping the hard-baked earth around the huts with hand brushes made of golden Amanzim-tetse reeds and sprinkling it with water. This they had to fetch and carry in buckets from the river so that the dust could be securely laid around the dwellings for the rest of the long, hot day. Some of them would be pounding corn or millet in the great wooden mortars that stood in each kraal like anti-aircraft missiles on their pads ready for launching into the air. . . .

Very often François would see 'Bamuthi's oldest girl, barely ten, combining pounding with the care of her baby brother. She carried him securely, tied to her slim, long back in a shawl, while she lifted the enormous wooden pestle, almost twice her own height, high above her head to crush and recrush again and again the purple millet in the mortar. So at home would the black baby be there that although its head wobbled in the process as if it would fly from its neck, its eyes remained shut in the happiest of sleeps. No child was ever too small to be included in the life of family and tribe, and François never saw an infant excluded or left to its own devices, no matter how early the morning or late the night. Everybody belonged absolutely to everybody else in a way that passed all European understanding, until one is compelled to wonder whether the sight of all this did not cause François, in the depths of the unknown in his own heart, to feel some kind of envy, a twinge perhaps of having been left out of some subtle but essential scheme of things, despite all the manifest good fortune of his own upbringing.

Obviously, tradition may be the vehicle of values so precious that, when viewed in this way, we feel ourselves to be "on the outside looking in." Yet we could not live in that society. Tolstoy could never *be* a Russian muzhik, no matter how much he envied the peasants their simple faith. Can the strengths of traditionalism be consciously regained, without its confinements? Two other novels deal by implication with this question. One is another story by van der Post—*A Bar of Shadow*, which contrasts liberal Western ideas with the traditional outlook of prewar Japan. The other is Richard Llewellyn's *Man in a Mirror*, portraying the agony of transition from tribal to "civilized" life for Africans.

FRONTIERS

David and Goliath

THERE is so much reading material now available on the abuse of the environment, the waste and misuse of natural resources, and the commercial exploitation of human credibility, appetite, and self-indulgence—with more coming out every week—that an editor wishing to deal with this endless flow of information and concern can hardly decide what to do. Summaries have little impact. Bibliographies serve only the researching few. Horror stories may briefly arouse, but eventually generate self-protective indifference. Yet the facts need to be known.

First, then, a fractional sampling of "facts."

A recent issue of *Economic Priorities Report* (vol. 5, no. 2—issued by the Council on Economic Priorities, 84 Fifth Ave., New York, N.Y. 10011) focuses on land leases for coal mining in the United States. Acceleration of coal production is certain and on the way. A federal spokesman has predicted "an increase in coal production from the 602 million tons mined in 1973 to 962 million tons per year in 1980." There will be, he says, extensive "gasification" of coal, conversion of oil-burning plants to coal, major expansion of coal mining, and abandonment of price controls. Coal mining is rapidly moving West.

Most of the nation's coal, 57% or 850 billion tons, is found west of the Mississippi. The American public and Indian tribes own 80% of this western coal. The Northern Plains Fort Union Formation alone contains 40% of the estimated coal reserves in the US, and 85% of that is public or Indian owned. The rights to 20 billion tons of western coal have been leased to private corporations by the Department of Interior.

Fifteen leaseholders control 70 per cent of the leased land, and five big oil companies are among these fifteen largest leaseholders. Many of the leases are held inactive until coal prices go up. There is no evidence, the report states, that "the public has ever received a fair market value for its

coal." Nor have the leases issued by the Department of Interior been related to a market demand for coal. Both senators and congressmen have objected to this arbitrary leasing policy.

Coal leases were at first granted by the Bureau of Indian affairs without requiring environmental impact statements, and after the courts ruled that EI statements must be provided by the mining companies, the first one prepared (relating to a lease of Crow Indian land in eastern Montana) was challenged by citizens' environmental groups as shallow, inaccurate, and unfair.

Looking ahead, the report states:

Over 500 acres of Indian land were strip-mined in 1973. This figure will at least double in the next few years as new strip mines begin producing. Coal-bearing Indian lands are located primarily in the arid southwestern desert where reclamation of stripped land is judged impossible, or in eastern Montana where reclamation has yet to succeed. Stripping is the only coal-mining method now used on western Indian land.

A biologist with the Northern Plains Resource Council said of the seeding program in Montana:

The annual grasses they plant on the reclamation plots are invasive, squeezing out the perennials on good land, so you get double damage. . . .

They don't know whether these revegetated spots will survive an extreme season. That will take years. They'll have to use biological succession, and that takes time. Acceptable reclamation for a rancher would be the development of a native perennial range.

I think revegetation is a kind of red herring because no one claims they can restore the ground water. They want to mine lush meadows. That's sub-irrigated pastureland, the water is near the surface. They don't know how to restore a sub-surface aquifer.

Well, after reading through the 48 large pages of this report, it seemed to us that what Jennifer Cross said about the recent Senate inquiry into Nutrition and Human Needs (see last week's *Frontiers*) applies also to energy resources: "Well-

motivated people suggest humane and necessary reforms, but these will not be carried out because they run counter to the interests of the power structure." How *do* humane and necessary reforms get under way?

Basically, it is a David-and-Goliath situation, with the remedies depending upon the ingenuity, persistence, and moral intelligence of individuals and small groups. Largescale power has built-in processes of self-defeat. The Winter issue of *People & Land* (345 Franklin St., San Francisco, Calif. 94102) tells about the work of one group:

In 1910 there were 890,000 black owner/operated farms in the United States. By 1970, the Department of Agriculture could identify only 79,000. To turn this trend around is the major aim of the National Sharecropper Fund.

Three years ago, the NSF began to encourage and assist two farm cooperatives, one in Virginia and one in Georgia in the production of organic vegetables. NSF soon discovered that the market for organic food is tremendous. It is now estimated by a Bank of America study that by 1975 40 per cent of all food sold in this country may be organic. This growing demand for organic food offers an opportunity for small farmers to capture a market that is largely ignored by the giants of commercial agriculture.

Successes in Virginia and Georgia have led to establishment of the first training center for organic farming in Wadesboro, North Carolina, where the depleted soil is being restored on a hundred acres. Good harvests of twenty crops have already been obtained. One goal is to reverse the direction of the migration from farm to ghetto, which may result from showing that farming is now a good way to make a living.

Another *People & Land* story describes the success of four farmworker families near Fresno (Calif.) who made a down payment on 40 acres, then leased a separate plot of five acres for planting cherry tomatoes to make enough money to improve the 40 acres with a well and some grading, and to buy equipment. They did so well with the tomatoes that within a year they had paid off their mortgage and improved the farm, and

they are now in full vegetable production on their own land. With this record in evidence, other farmworkers are looking around for land.

Meanwhile, Ecology Action, 2225 E1 Camino Real, Palo Alto, Calif. 94306, is circulating a research report (\$2.00) on the mini-farming of high quality vegetables by bio-dynamic methods which are cost-competitive with mechanized agriculture.