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MEANING, ORDER, IDENTITY

WE don't ordinarily go back five hundred years in history for light on present problems. People who lived so long ago could not, we say, have had problems like ours, which call for knowledge that is up to date. But this may provoke a question now increasingly asked: Why is modern knowledge so inadequate? A good man of five hundred—or five thousand—years ago might reply: Because the wisdom required for solving really serious problems is not a product of time, or what you moderns call progress. Nor do the basic problems change very much, from century to century.

In short, neither we nor our problems are unique. If we can accept this blow to vanity, we may find it useful to consult a thinker of the past. The one we have in mind is Nicholas of Cusa, born in 1401 on the shore of the Moselle, educated by the lay Brothers of the Common Lot in Deventer (who had taught Thomas à Kempis a century earlier and to whom Erasmus would come for learning about eighty years later), and who, at the ripe age of twenty-five would be appointed papal legate to Germany, thereafter serving the Pope as ambassador to Constantinople, becoming a cardinal in 1448. He might be called the last of the great Churchmen, and while his thought ranged freely in philosophic areas he escaped the charge of heresy except for the claim that he was a pantheist, which he most certainly was.

It was while returning from his mission for the Pope on a long sea voyage, filled with dreams of reconciling Christianity with Mohammedanism, that a sudden insight gave him the heart of his philosophic theory, which he set down in *De Docta Ignorantia* (1440). (This famous work was published as *Of Learned Ignorance* by Yale University Press in 1954.) In it he says:

> The greatest danger against which most men have warned us is that which comes from communicating intellectual secrets to minds become subservient to the authority of an inveterate habit, for such is the power of a long-lasting observance that most men prefer death to giving up their way of life. . . . Today it is the Aristotelian sect which prevails and it holds the coincidence of opposites for heretical, which yet is the only way to ascend towards mystical theology. It would truly be a miracle if they repudiated Aristotle and started on the path to the summits.

He means that truth lies only in the synthesis or resolution of opposites, of the contradictory propositions of which our knowledge is made up. A wise man is one who knows the limitations of his knowledge, who thus becomes learned, though admittedly ignorant—in contrast with the "Ignorant Learnedness" of the Aristotelians and the Thomists, as Giorgio de Santillana puts it in an essay on Cusanus (*The Age of Adventure*, Mentor, 1556). Here, however, we want to stress the importance of his first observation—on subservience to "inveterate habit," for habit is blinding us to the solution of what we regard as our unique and apparently insoluble problems.

The habit that is responsible is the assumption that *now*—since Galileo—we really know about the world and its laws, and are on the way to final knowledge. Quite simply, this means that the truth is all out there in the relationships of the world and its parts and forces, and that when these are defined, and the dynamics of how they work together understood, we'll know all we need to know. The world, in short, is a physical thing and only a physical thing. Galileo didn't realize, of course, this implication of his doctrine, and as a cosmopolitan thinker who had studied the ancient Greek philosophers would surely have objected to the claim that became a shaping influence on subsequent intellectual and scientific history.

The ardor behind Galileo's campaign for recognition of the physical laws of cause and effect grew out of his determination to free the

mind of his times from the "inveterate habit" of assuming that truth about the world could be found only in theological books. When a doctor of philosophy at Padua refused to look through Galileo's telescope, he behaved, Galileo said, "as if with magical incantations" he could "charm the new planets out of the sky." In a letter to a patron he said:

> Methinks that in the discussion of natural problems, we ought not to begin at the authority of places of scripture, but at sensible experiments and necessary demonstrations. . . . Nature, being inexorable and immutable, and never passing the bounds of the laws assigned her, . . . I conceive that, concerning natural effects, that which either sensible experience sets before our eyes, or necessary demonstrations do prove unto us, ought not, upon any account, to be called into question, much less condemned upon the testimony of texts of scripture, which may, under their words, couch senses seemingly contrary thereto. . . .

What could be more persuasive, more reasonable, than this argument that the right way to learn about the world is from our experience of it?

There are two great questions about the world for which we require answers. The first is, Does it have meaning? The other, Is it orderly? To be acceptable, the answers we obtain should fit together, they must be harmonious. In Galileo's time the Church subordinated all notions of order to what the doctors claimed to be the meaning of the world—it was determined by God's will. If you want to understand the processes going on in the world, the church authorities declared that you must see what God (and his interpreters) have said on the subject.

Galileo found this insistence increasingly ridiculous. He preferred to look directly at the world for his answers, and this common sense eventually gave unlimited authority to his scientific followers. It became an "inveterate habit" to try to think as scientists think.

How do they think? They look for the signs of order. They study the behavior of what Galileo maintained are the only things worth studying—the only things we can be sure of finding out about—matter and its modes of motion. As the motions of matter are understood, they are described in terms of natural law. Understanding for the scientist means prediction. If you can predict an event, you know what makes it, what it *is.* Progress in science is progress in defining the orderly behavior of material objects of which the world is made up. That is all there is to it—quite a lot, of course—no end to it, perhaps—but we naturally go on studying the world to obtain additional knowledge.

One thing more. A theory of order or causation, in order to qualify as scientific, must be testable. If you can't subject it to verification—by experiment or repeated observation—you can't make it a part of our knowledge of the world. This seems a wholly reasonable rule.

The other question—What does it mean?—remains. Why did Galileo ignore it? He didn't ignore it, but left it to the Church, claiming that he was a good and believing Christian who had no intention of interfering with the human need and theological provision for salvation. Salvation, after all, was then held to be the only important meaning of the world. What could be more important than blissful immortal life in Heaven, and the avoidance of eternal tortures in Hell? The world was no more than cosmic scenery for the drama of salvation—a flat place with edges, graced now and then by the tears of angels for rainfall, and so on. But Galileo couldn't help but disturb the equilibrium of a world so casually and arbitrarily arranged. He made the mistake of insisting that even God would have to obey natural law, and for this his and Copernicus' books were banned by the Inquisition. They stayed on the list for two hundred years.

It is by such means that "inveterate habits" are enforced by human institutions. And although the penalties of Hell copied by the Inquisition were by comparison crude and inadequate, they served fairly well for the restraint of heretics, proving persuasive to all but heroes such as

Giordano Bruno. So the habit of thinking like scientists—concerned with only physical matters—had negative reinforcement from church policy.

Today we are confronted with a world of forces over which we have frightening control, through scientific mastery of its laws, and at the same time a world from which meaning has been completely subtracted. This is the definition of our main, probably only, problem, and we cannot solve it without the restoration of meaning. Only a renewal of meaning will supply the resolve to regulate humanely what we are able to do. The problem is moral, not technical. Everyone with any sense keeps pointing this out. But can we break our inveterate habit of denying meaning to the world? That seems the only important question.

The nature of meaning needs examination. The "why" of a thing is its meaning. The why of a human lies in what he intends, longs for, is trying to do. Meaning, then, exists only in movement toward some goal, some end, some point of realization. It exists only for an intelligence that can think about it, consider its implications and amplifications, and decide what to do to reach its fulfillment.

In short, meaning is a subjective reality. Meaning-seeking beings are subjective in nature. They may have bodily apparatus to put themselves in touch with the areas of objective experience—subjects without objects are practically a contradiction in terms—but their experience is evaluated by subjective concerns. This amounts to a psychological law. All of us except the more dutiful scientists reinterpret scientific laws so that they have meaning for subjects. Evolution is probably the best example. For the biologist it means change and modification of organs and species; for us it means *progress*, getting somewhere it is desirable to go.

The human determination to locate meaning and pursue it is plainly evident to those who study themselves and other human beings. The psychologists have the term "motivation" to describe this animating quality of our lives. Cultures exhibit collective motivations revealing the consensus of what most people have decided they should do. In *The Stubborn Structure* (1970), the Canadian scholar, Northrop Frye, calls this body of opinion and knowledge the "myth of concern"—what we feel to be important in life. The findings of science play a part in this concern, supplying the background of facts, but which we alter and charge with our own ideas of meaning. As Frye says:

> Naturally the main outlines of the scientific picture of the world are a part of our general cultural picture, and naturally, too, any broad and important scientific hypothesis, such as evolution or relativity, soon filters down into the myth of concern. But scientific hypotheses enter the myth of concern, not as themselves, but as parallel or translated forms of themselves. An immense number of conceptions in modern thought owe their existence to the biological theory of evolution. But social Darwinism, the conception of progress, the philosophies of Bergson and Shaw, and the like, are not applications of the *same* hypothesis in other fields: they are mythological analogies to that hypothesis. By the time they have worked their way down to stock response, as when slums are built over park land because "you can't stop progress," even the sense of analogy gets a bit hazy. If a closed myth like official Marxism does not interfere with physical science, we have still to remember that physical science is not an integral part of the myth of concern.

Thus we do find ways of getting around the scientific mode of thinking, simply because a life without purpose is psychologically impossible and to many will seem morally reprehensible. Wouldn't some kind of consensus help in this? But while consensus in science is made possible by rigors of experiment, the exactions of method, and the review by colleagues, how could this be arranged for an area of experience that is subjective? Another passage by Northrop Frye may be of assistance here. He says:

> It is becoming clearer that the impulse which creates the mythology of concern and makes it socially effective is a central part of the religious impulse. Religion in this sense may be without a God; certainly it may be without a first cause or controller of the order of nature, but it can never be without the primitive function of *religio*, of binding together a society with the acts and

> beliefs of a common concern. Such an impulse starts with one's own society, but if it stops there it sets up a cult of state-worship and becomes perverted. We know in our own experience how our mythology of concern works against exclusiveness: all genuine concern recognizes the claims of the Negroes to full citizenship, for example. Yet the kind of problem represented by the disabilities of Negroes is much broader in scope, as many suffer from similar disabilities who are not Negroes, and if we make the symbol of coloured skin an end in itself, like some of the proponents of "black power," we merely set up a new kind of anxiety. The force that creates the myth of concern drives it onward from the specific society one is in to larger and larger groups, and finally toward assimilating the whole of humanity to the ideal of its dialectic, its concerned feeling that freedom and happiness are better for everyone without exception than their opposites. All national or class loyalties, however instinctive or necessary, are thus in the long run interim or temporary loyalties: the only abiding loyalty is one to mankind as a whole.

While this seems a good formulation of the way to solve the problem of the intense animosities around the world, Northrop Frye remarks that if it were all we had for inspiration, "the myth of concern would end simply in a vague and fuzzy humanitarianism." He goes on:

> But in proportion as one's loyalty stretches beyond one's nation to the whole human race, one's concrete and specific relationships become more obvious. A new kind of society appears in the center of the world, a society which is different for each man, but consists of those whom he can see and touch, those whom he influences and by whom he is influenced: a society, in short, of neighbors. . . . But the sense of a society of neighbors takes us beyond ethics and values into the question of identity.

This seems exactly right. Nothing less than a sense of common identity can make our society over into a society of neighbors.

How can that be achieved? Not, fortunately or unfortunately, by the compulsion of scientific fact. Science is able to persuade us of the unity of our physical existence, but not that we all have a common meaning for our lives. Science cannot even give us a theory of common meaning to think about, since there is no sense of meaning at its foundation. Its theories are all about things which are separate, different from each other, although in an orderly fashion. If all "things" were identical, there could be no science.

We need, it seems clear, to add a third question to the two we have asked. Besides inquiring whether the world has order, and whether it has meaning, we need to know what we are—we, the beings distributed in space and time, yet longing for meaning and hoping for harmony and fulfillment.

What, then, is the stuff of our being, the reality of our lives?

We could call it consciousness, since we are all conscious But the consciousness of each one is his own. And this, we should notice, is what makes the difficulty of the scientist in attempting to consider the other half of our experience—the subjective world. Here the mind seems to get lost in dreamy speculation. The individual may have his certainties, but how can he demonstrate them to the world? How can he prove them even to his next-door neighbor? Subjective science, the physicist, the biologist, the chemist will tell us, is a contradiction in terms. And meanwhile, the whole panoply of existence spread out before our eyes remains equally a mystery—as to its origin—to the scientist. The scientist knows better than to make declarations about ultimate beginnings, although he feels competent to predict the decline of the universe into an ultimate entropy, in which all will go back, he says, to the chaos of random motion.

Yet the world, past and present, is filled with mythical explanations of both beginnings and endings, some rich in subtlety and suggestion, others crudely unbelievable, yet widely believed. What may be the most ancient discourse of all concerning how the world came into being is a Vedic hymn, who knows how old, which has hardly been improved upon since it was first recorded. The beauty of these lines makes them worthy of repetition:

> Nor aught nor nought existed; yon bright sky
> Was not, nor heaven's broad roof outstretched above.
> What covered all? what sheltered? what concealed?

Was it the water's fathomless abyss?
There was not death—yet was there nought immortal,
There was no confine betwixt day and night;
The only One breathed breathless by itself
Other than It there nothing since has been.
Darkness there was, and all at first was veiled
In gloom profound—an ocean without light—
The germ that still lay covered in the husk
Burst forth, one nature, from the fervent heat.
Then first came love upon it, the new spring
Of mind—yea, poets in their hearts discerned
Pondering, this bond between created things
And uncreated. Comes this spark from earth
Piercing and all-pervading, or from heaven?
Then seeds were sown, and mighty powers arose—
Nature below, and power and will above—
Who knows the secret? Who proclaimed it here
Whence, whence this manifold creation sprang?
The Gods themselves came later into being—
Who knows from whence this great creation sprang?
He from whom all this great creation came,
Whether His will created or was mute
The Most High Seer that is in highest heaven,
He knows it—or perchance even He knows not.
Gazing into eternity . . .
Ere the foundations of the earth were laid,

* * * *

Thou wert. And when the subterranean flame
Shall burst its prison and devour the flame . . .
Thou shall be still as thou wert before
And knew no change, when time shall be no more.
Oh! endless thought, divine ETERNITY.

Does this mean that there was once an original consciousness in which we were all united, and will be united again, after the pilgrimage of life or lives? For those who are neighbors and resolve to be brothers, it might be so.

REVIEW
"ANYTHING LIKE A SPIRIT IN MAN"

THERE is a considerable difference between the wonderings and strivings of a research scientist—whose task is the development of theory—and the printed record of his work. The "human" side of his achievement is usually left out of his papers and books, just as, in the history of science, we get almost exclusively the "bottom line" of what an innovator accomplished, with little attention to competing or discarded theories. History, we suppose, is and ought to be a concise account of what *really* happened, which means a recital of the correct conclusions, and the succession of conclusions is then made to appear as one following another in logical sequence—a triumph of linear progress. Unfortunately, this way of writing scientific history may be a Cartesian distortion of both the realities of human life and the way in which the scientific grasp of the world of nature is gradually enlarged.

The book, *Something Hidden* (McFarland & Co., Box 611, Jefferson, North Carolina 28640, 1983, $22.00) by Louisa E. Rhine, who died in March of last year at the age of ninety-one—the story of her life with J. B. Rhine, investigator of extra-sensory perception—is of particular value in showing how a serious scientist works. It is also an engrossing account of husband-and-wife collaboration, their mutual support, and the human side of their common experience. The words of the title, "Something hidden," are taken from the first line of Kipling's *The Explorer,* which continues, "Go and find it"—a poem which Rhine had clipped and put in a desk drawer. It stood, Mrs. Rhine says, for his whole career.

She and he—"Banks," as she called him—met when the Rhine family moved from the hills of Pennsylvania to occupy a house Louisa's family owned. This was in 1911, when he was sixteen and she twenty—teaching school. Their marriage came nine years later, after he had done a stint in the Marines in the first world war. In time they both earned doctoral degrees in botany—she first, Banks catching up—and their first professional engagement of note was in 1923 with the Boyce Thompson Institute for Plant Research in Yonkers, New York. But during the year before that, in Chicago, where they were going to graduate school, they attended a lecture by Conan Doyle, who "spoke very earnestly of his belief that deceased persons can communicate with the living, and that the fact could be taken as proving survival after death."

This was apparently the seed which grew into a lifetime of psychic research for Rhine. He was already a scientist in spirit. While their botanist friends joked about Doyle's "credulity,"

> Banks urged that it was not the part of openminded scientists, even embryonic ones like all of us, to deny an unexplored idea or claim before giving it some study. To do so, he said, just because it was on a revolutionary instead of an orthodox topic was unworthy of the true spirit of science. Conan Doyle's lecture thus did not affect Banks the way it did his botanist friends, but he did wonder how good was the evidence on which the man had based his conviction and whether that evidence was strong enough to be counted as more than the fulfillment of wishful thinking. . . . But one aspect of Conan Doyle's lecture was entirely convincing. That was his joy in the knowledge he thought he had of the survival of the spirit after death. This certainly strengthened Banks' belief that the world needed to know whether or not that conviction was justified, needed to know whether or not the question could be answered decisively by the method of scientific investigation.

This experience initiated a change in Rhine's scientific interest. He wrote to the American Society for Psychical Research in New York, and to William McDougall, head of the psychology department at Harvard, asking about the possibility of work and training for a career in psychical research. There was then no job in that field, but Rhine's interest continued. He attended some séances, concluding that one medium had faked her results, while another seemed to possess superphysical ability. This was in Boston, where

the Rhines had moved, hoping to forsake botany for psychic research.

Both Louise and Banks were believing Christians in their youth. His faith was intense, and she was born in a Mennonite family having complete reliance on the Bible for truth and guidance. They both outgrew Christian belief as a result of university education, but the transition was longer and more painful for Banks, lasting until after the war. Apparently, there was a transfer of his religious integrity to his conception of the practice of science. This became evident in the gradual change of the focus of his interest from proving the survival of the soul after death to working on telepathy and other extra-sensory capacities. The evidence of survival obtained through mediums, he found, was at best ambiguous, and while he continued to work with such materials for years—at Duke University, where McDougall had gone to teach, and Rhine obtained a job in McDougall's department—he finally decided that the real question was "whether there is a human function of extra-sensory perception." As he put it, years later, survival of death "depends on whether there is anything like a spirit in man at all." Psychic capacities which are exercised with comparative independence of physical law would be suggestive of such a "spirit in man."

Rhine's work in mental telepathy (using Zener cards) was reported in his now famous study, *Extra-Sensory Perception*, published in 1934. He and McDougall started the *Journal of Parapsychology* in 1937, one of its purposes being to challenge the behavioristic assumption that mind is "but a functionless by-product of increasingly complex mechanical systems." Parapsychology, McDougall said in an editorial, would be used to designate "the more strictly experimental part of the whole field implied by psychical research." This work, carried on at Duke for many years, was regularly reported in the *Journal of Parapsychology* and in books by Rhine and Louisa. In *The Invisible Picture* Louisa maintained that "psychical studies add up to more for human kind than this mundane life alone suggests."

> This life, the sensory life alone, turns out to show but half a human. The other half is shown . . . to represent a different level, one as yet too much unknown. That is partly, of course, because it has been so long held to be beyond investigation—to be an area for religion, not for science.

The spirit of the great undertaking the Rhines pursued together seems well embodied in an entry in Louisa's diary, for November 29, 1938:

> Dr. McDougall died last night. . . . Banks voiced the old, old question, the one which has actuated so much of his intellectual life and mine. He said something like, "Now that this grand old man is passing—what? Where does he go? What is the answer? . . .
>
> Maybe now he knows the answer—if there is a knowable answer. Now he's gone and Banks vows anew that we *will* hunt for it. And I say we won't always be messing around with these little narrow-minded two-for-nickel psychologist critics. We will just somehow go ahead and pioneer. I think that's Banks' forte and he does too.

A book of related interest—*The Edge of Intuition* (Tarcher, 1983, $14.95) by Philip Goldberg—also starts out with a criticism of behaviorist psychology in behalf of closer attention to "the deeper realms of mind and spirit." While we have a quarrel with this book—several, in fact—it is useful in its account of the recent psychological stance which ruled out even the possibility of intuitive perception on the ground that knowledge is to be obtained only by "a rigorous interchange of reason and systematically acquired experience." This, the author says, is the approach of "scientism," which he calls the ideology of science.

> Flushed with success, the juggernaut of science gobbled up terrain formerly held by philosophy, metaphysics, theology, and cultural tradition. We sought to apply the methods that worked so well in the material realm to answer questions about the psyche, the spirit, and society. Through experimentation and the application of reason—which was elevated to the pinnacle of the mind—it

> was assumed we would come to know the secrets of the universe and learn to live. . . . The institutions that teach us how to use our minds as well as the organizations in which we use them, are so skewed toward the rational-empirical ideal that intuition is seldom discussed, much less honored or encouraged. From grade school to graduate school, and in most of our work settings, we are taught to emulate the idealized model of scientism in our thinking, problem-solving and decision-making. As a result, intuition is subject to various forms of censure and constraint.

Yet as this book shows, the wind of human interest and inclination is now blowing strongly in the other direction, with an excess of enthusiastic talk about "higher states of consciousness." Such states undoubtedly exist but finding access to them may involve something quite different from the pursuit of some kind of spiritual ambition. This possibility is our chief quarrel with Mr. Goldberg's book, despite its value as a general study of a most elusive subject or human power. The most interesting aspect of its contents is the large collection of anecdotes and examples of intuitive perception scattered throughout the pages, especially those taken from the experience of eminent scientists. As Karl Popper has put it, "There is no such thing as a logical method of having new ideas, or a logical reconstruction of this process. . . . Every discovery contains an "irrational element' or a creative intuition."

The author quotes a psychologist who says:

> "We leap to correct answers before there are sufficient data, we intuit, we grasp, we jump to conclusions despite the lack of convincing evidence. That we are right more often than wrong is the miracle of human intellect."
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> Most of that miracle is what we call intuition. . . . For individuals, the intuitive edge means better decisions, more creative ideas, deeper insight, and a smoother, more direct route from desire to fulfillment.

Yet when going "by intuition" becomes fashionable, as may now be happening, especially for those who dislike the discipline of hard thinking, there is a tendency to "assume that the way to be more intuitive is to be less rational." An impulse may be the opposite of an intuition. As for cultivating the intuition, the best advice we know is that given by Plato in his seventh epistle.

COMMENTARY
THE OBSCURE MORAL ORDER

THERE are signs—multiplying signs—that people are growing tired of trying to live in a world that has no moral meaning except the little that we are able to pump into it. We want the meaning to be there in the first place, as something more reliable than the conventions we devise in the hope of improving our practical relations with our fellows. What is wrong with these conventions? Nearly all of them have their origin in calculating self-interest, which means that their claim to stability is fraudulent. You do the right thing because it is right, not because it is convenient or profitable.

But are we able to *believe* in the moral law?

Well, some individuals believe in it, and by their behavior they keep the idea of its reality alive. Why is it that when we form organizations to forward and support what we say is the moral law, we create about the worst institutions you can imagine?

How do people become aware of the idea of moral law, and what are some of the signs that it may be reviving as a basis of human life? The second book given attention in this week's Review article is an example. The idea of moral law does not die out because the intuition keeps on declaring it real. We feel this reality even though its operation remains obscure. It is there as a looming presence—the source of both vision and conscience—yet it cannot be enforced. One wonders why.

A sage comment by Mr. Goldberg is to the effect that "developing intuition is largely a matter of being aware of the obstacles that inhibit its effectiveness." Vanity and self-righteousness are among its enemies, also an inordinate hunger to be "right." It seems clear that the best intuitions are from the mind when in an almost unconscious state of elevation, of self-forgetfulness. A second important consideration is how we interpret our intuitions since we all have them: they are in a sense the starting-points of all worthwhile thought. The mind dominated by self-interest or a desire to "get ahead" narrows the focus of what may have originally been an insight from a higher point of view. Mr. Goldberg seems to "intuit" this now and then, but some of the directions he gives on how to prepare for or invite intuitions are not likely to help people with such tendencies, and a quite artificial idea of the "higher consciousness" may result. The true higher consciousness is ethical in character and scope, if we take either the Buddha or Plato for a guide.

CHILDREN
. . . and Ourselves
ATTACK ON A FALLACY

THE opening article of the Fall 1983 *Teachers College Record*—which has the quality and purpose of an editorial—is by Norman Cousins, who, after half a lifetime as editor of the *Saturday Review*, is now teaching in the medical school of the University of California in Los Angeles. His subject, he has said, is the humanization—both philosophical and social—of would-be doctors. His article in the *Record* is probably a good illustration of how he goes about this. It is also an example of Emerson's "Man Thinking" and of the maturity of liberal intelligence in the present.

His title is "Think of a Man." His theme is that the revolutionary discoveries of both science and medicine are virtually useless if the civilization they are intended to benefit is going insane. From this perspective he stands beside—in some ways above the course of history in the Western world, upon an independent foundation of moral awareness. This is indeed thinking like a man. It would be well for this mode of inquiry and evaluation to pervade not only the medical schools, but all the institutions of learning. The maturity of such an outlook becomes evident in a discussion of Darwin:

> Charles Darwin's ideas represent a monumental contribution to scientific knowledge, but they have never been proved. In particular, the theory of evolution, forecast by Buffon, speculated on by Lamarck, and developed by Darwin and Wallace, has not been proved because in six thousand years of recorded history a change from one major species into another has never been scientifically observed. But life in various forms has existed on this planet for several hundred million years and our knowledge is confined to a puny fraction of that period. As it concerns the history of man himself we have only the vaguest ideas about his age on earth, whether it covers a million years or considerably more or less.
>
> At any rate, even without proof, Darwin's carefully assembled ideas have seemed reasonable enough to the scientific intelligence to be accepted as a working theory.
>
> It is possible, however, that modern man may furnish proof of the Darwinian theory in reverse. It may be entirely within the reach of man today to demonstrate the changeability of species—except that it may be devolution rather than evolution. The change may be away from higher or more selective development to less complex and cruder forms.

These are thoughts by a man who seems wholly free of the constraints of any orthodoxy, scientific or otherwise. He looks at facts—what are actually established facts—in terms of their relevance, their implications, even their remote possibilities, unwilling to rest on the morally neutral ground created by scientific assumption. This illustrates the freedom of an open mind. He continues:

> Though this is sheer speculation, it is possible that there can be, and perhaps already has been, retrogression of the species. Man may have gone up and down the ladder of evolution several times during his millions of years on earth. It is at least theoretically possible that he has built other civilizations as complex as our own and suffered the same inability to operate them. He may have surged far ahead in his inventiveness, but may have been deficient in creating the basis for sanity in the relations between the various groupings into which he was divided. No one can say that our generation is the first that has played with nuclear energy or that there may not have been earlier uncontrolled situations in which radioactivity brought about a whole reshuffling of species.
>
> If limitless knowledge and applied science can create an environment in which man's basic existence is threatened he may respond or adapt by sinking far enough in the order of intelligence so that science is beyond his reach whether for good or evil. The tendency of nature may be to push the forms of life upward through a process of natural selection, as Darwin argued, but it may also be true that man has cooperated in this natural process only up to a point. That point in the past, as it seems to be in the present, may be a point of maximum opportunity and maximum power from which he abruptly veered away turning his power on himself and the essence of his being.

A scientifically-minded reader might sniff, "What right has Cousins to link his speculations about cultural ups and downs with the biological processes which concerned Darwin?" Well, he has at least the right that Darwin provided in saying in a letter to Wallace (1864), commenting on Wallace's paper on "Man": "The great leading idea is quite new to me, *viz.* that during late ages, the mind will have to be modified more than the body; yet I had got as far as to see with you that the struggle between the races of man depended entirely on intellectual and *moral* qualities." (The emphasis on "moral" is Darwin's.) It is evident, surely, that most of the ups and downs of history within our recollection have been essentially moral oscillations.

Mr. Cousins turns to social vision and issues:

> Now think of men who were identified with great causes. Think of men who fought to establish the most revolutionary principle in all history—namely, that the purpose of the state was to serve the cause of the individual, beyond the reach of authority of the nation. . . . Think of the men who continued and enlarged this cause, frequently at the cost of their lives. These were the leaders who believed that the act of being born carried with it a long list of natural and basic rights—political, spiritual, social. Erasmus, Milton Harrington, Cowley, Locke, Spinoza, Montesquieu, Voltaire, Garibaldi, Mirabeau, Alfieri, Manzoni, Hume, Woolman, Penn, Fox, and the American revolutionary leaders Franklin Washington, Samuel Adams, John Adams, John Dickinson, Jefferson, Madison, Paine, Wilson, Hamilton, Freneau. Only a partial list but enough to serve as focus for purposeful thought about the relation of the individual citizen to the nation. These men believed in the independence of the nation and in self-government—not as an abstraction or an end in itself but as a specific way of protecting individual man and assuring his right to participate in the shaping of his society.

Next he considers how such men think—first about ends, then about means. They were not captives of institutions whose only concern is with keeping the institutional processes going, regardless of where they go.

> When a man like Jefferson thought about government, the things that came to mind were not concerned with grandiose political machinery or master operational plans for the control of a nation. Each idea about government had something to do with people. Would this feature of government help a man to grow? Would that aspect of government help force errors into the open by government itself? Would this provision of government make it possible for a man to pick his own church or books or newspapers or friends? Was there any danger that government would arrogate to itself an official conscience that would seek to displace the conscience of the individual or limit its range? How could a man be fortified with rights so that overblown functionaries could not barge into his home at will just to make him squirm?
>
> It was natural that a Jefferson would think of these things for he knew that the tendency of a state was to collect powers far beyond its needs, just as it was the tendency of the men at the top to try to make a permanent acquisition of the government itself. What counted most was not the sovereignty of the state but the sovereignty of the individual. The great cause, therefore, was the cause of the individual against the state.

A closing thought by Mr. Cousins might be the most important of all to communicate to students:

> No greater fallacy exists in the modern world than that the individual in a free society is helpless. If anything, he exercises his power without being aware of it. Vast sums are spent to find out what he thinks or is likely to think. No major move can be made without him.
>
> The question for the individual is not whether he possesses power but how to use the power he possesses. He will receive information if he demands it. He can appraise information if he will give time to it. He can think, he can talk, he can write, he can associate, he can make his opinions known. He need not wait to be asked for his views. He can free himself from the daily trivia that soak up his time and energies and he can apply himself to what is important. Nor need he fear that this is an academic or futile undertaking. The act of informed dedication is a power by itself.

Very nearly all human ideals, goals, objectives are wholly dependent upon these capacities of the individual. Without awareness of this, education is a fraud.

FRONTIERS

News From Holland

IN the last November/December *Resurgence,* published in England—a magazine we receive in exchange for MANAS—a Hollander, Sietz Leeflang, is interviewed. At first a journalist and tech writer, Leeflang tells why he quit a good job with an electronics concern to found the Small Earth Center in the little Dutch town, Boxtel, where he was living. "I wanted to use science and technology to help and protect our small earth, which meant an experimental farm and a place where I could try out some of my ideas." He explains:

> As a journalist I was living in a kind of semi-reality, on a kind of island of dreams and ideas. I had a strong impulse to be involved with all kinds of practical things and with people who had the same feeling—to do things for ourselves and to become more and more self-sufficient. But when you get down to the nitty-gritty you find out that practicing what you preach is not so easy. . . . We started with some courses of energy-saving technology and a magazine, *The Small Earth.* At the beginning of '73 we rented a farm from the municipality. We had to do a lot of reconstruction work on the farm. The buildings were very bad—they had to be completely reconstructed. We did everything ourselves, and that was a time of pioneering which I shall always remember. It was a very healthy and positive experience. We started with 12 people, and a few years later we had about 20.

Stories like this one illustrate the advantage of seeing regularly a European paper written in English. There are frequent reports of the good things happening on the continent, and in enough detail to give you a sense of reality. In sum they are vastly encouraging.

Asked what went on at the Small Earth Center, Leeflang said:

> We were practicing organic and biological farming and husbandry. Also we were much concerned with alternative technology. . . . The Small Earth was the beginning of a chain of simple shops and farms and an ecological food movement. Also we had some influence through alternative technology. The fact that many people now are interested in windmills and in solar collectors has something to do with the fact that we got about 15,000 visitors per year to come and see our center. There were TV and radio programs and the press wrote about us. . . .
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> Even the Small Earth became too big! I found that I could not put some of my ideas into reality and therefore I left and started a small project of my own. I started a new magazine called *The Twelve Crafts.* We got money from our readers to start an organization for experimenting and developing new products, new ideas for small-scale businesses.

One goal was to eliminate the need for specialists who require a specialist's tools. "The principle must be simple, the form must be simple, and it must be possible to make it for a low price." They began with alternative forms of heating—wood stoves.

> We are always looking for products and ways of producing which are specially apt for small-scale, human and environmentally sound businesses. Small enterprises need some special and new products which people need. If we are looking for a new product and also a new way of producing it, then we ask ourselves: "Is it possible to make it in a way a craftsman can make it? " So, our stoves are not for large industry, they are well made and made for small businesses. We have produced a ceramic stove which you can build in the house where it has to go and be your own craftsman, or you can build it in a small workshop. Tiles are used on the surface of these stoves, which makes it nice to look at.

Conventional iron stoves radiate an enormous amount of heat, but require frequent stoking to keep the heat coming, while a tile or stone stove provides infra-red radiation without heating up the air. You are comfortable without feeling a hot blast.

> The air stays cool for a long time and you can ventilate a house as much as you like. You don't have as much heat loss as you have with a centrally-heated house where you cannot open a window because you will lose a lot of heat and it costs money. But not so with stone stoves or tiled stoves. Also a tiled stove consumes only half what an iron stove consumes. Because of the infra-red it gives as heat, the losses in the house are much lower. So you come to a total

result of 30% of the original cost or less, with the same heat in the house, or even better.

Another completed project is a system for purifying "grey water" (water from the sink, the bath, etc.) by draining it into a solar greenhouse where it sinks through flower beds and a meter of earth and sand. Thus cleansed it goes to the outdoor vegetable garden. Even the heat in house-used water is conserved.

> And you have vegetables in January. You are eating fresh vegetables and spices in mid-winter without any extra cost. . . . Together with the composting toilet, which is a thing everyone can build in his own home, the grey water greenhouse can be a complete alternative to the modern sewer system. Sewerage costs a lot of money, millions and millions of pounds. These systems do not produce clean water—they produce water after filtration still filled up with nitrates and phosphates, and that gets into trouble with our surface water. Everywhere the water is dirty because of those nitrates and phosphates.

Two other developments of Sietz Leeflang's work are the spiral garden and semi-underground houses. The garden applies a suggestion of Bill Mollison who said when visiting: "When you build a spiral garden, you need only a few helping [companion] plants." Leeflang said:

> You want to have a lot of carrots but you need only a few onions, and onions are helping plants for carrots—they keep away carrot fly. In the spiral garden you need fewer onions or onion-like plants.

Underground houses save land and heat in crowded Holland, and you save two thirds of your heating cost, while building costs are a fifth to a tenth.

> This will be very suitable for organic and small farmers, for farm buildings, for farmers who have little money. It makes it possible for young people to build their own simple and cheap semi-underground houses near the farm, not disturbing the landscape. . . We need to do something to get some of our population outside the big cities. We have a concentration of population and there is no work any more for all those people. That is a great problem. In the countryside there is a lot of need for help to work the land and maintain life. We do not want to use our precious land for building new houses, so why not build underground?

This *kind* of thinking is surely what the world needs most, in practical terms. The way to spread it is by beginning to do it, each in his own way.