VOLUME XXXII, NO. 15
APRIL 11, 1979

# THE DIFFICULT SUBJECT

IT may be a matter of considerable—perhaps primary—importance that as a train of thought attains more generality, the less interesting it becomes. Abstractions, which are supposed to have the highest truth-content, are pallid affairs. Yet we know that, in what we call science, the achievement of first principles is the fundamental goal. A science has maturity only when the explanatory power of its abstract ideas or laws is able to overcome the disorder of a great many particular things or events. It defines a lot of things as particular cases of one thing—which is not of course a thing but a principle.

For the scientist, indeed, the pursuit of abstract principle is the highest good. The more inclusive the abstraction, the greater the explanatory leverage. We are persuaded of the reality of this leverage because of the things scientists have been able to show people how to do. The machines on which we so largely depend, the transport and communication devices which give our life its pace, the almost immeasurable power to destroy made available to good men and bad—all this is the fruit of scientific inquiry. The potency of technical abstractions is undeniable.

Yet we now know that science is a limited sort of truth. Although its impressive power long hid from us its silences concerning crucial areas of human life, there were those in the past who saw this limitation clearly and sensed that eventually—as today—it would begin to be understood. Edmund Husserl wrote in 1929—just fifty years ago:

> The present situation of Europearn sciences calls for fundamental reflection. These sciences have lost the Great Faith in themselves, in their absolute meaning. Modern man of our day, in contrast with "modern man" of the Enlightenment, does not conceive science ant the new civilization shaped by it as the self-objectification of human reason, or as the universal function created by mankind in order to attain for itself a truly satisfactory life, an individual and social life directed by practical reason. This Great Faith, which at a certain time took the place of religious faith and which believes that science leads to wisdom—to an actually rational knowledge of man, the world, and God and through this to a life ever capable of improvement, but verily and from the outset worth living, a life in happiness, contentment, and well-being—this faith has doubtless lost its power in wide circles. That is why we now live in a world that has become incomprehensible to us, a world in which people strive in vain to find the purpose and the meaning of their doing that were once so clearly known and fully acknowledged by intellect and will.

This is about ourselves, and we know that Husserl was prophetic and right. While the scientific abstractions have their place, they are not what we thought them to be. If anyone doubts this conclusion he would do well to read William Barrett's *The Illusion of Technique,* a 1978 book which confirms Husserl's anticipation in considerable detail.

Yet we continue to pursue abstract knowledge because we cannot help it; after all, there are areas wholly untouched by scientific generalizations and laws. The founder of analytical psychology, Carl Jung, only a few years after Husserl wrote the above, remarked in *Modern Man in Search of a Soul* (1933):

> The rapid and world-wide growth of a "psychological" interest over the last two decades shows unmistakably that modern man has to some extent turned his attention from material things to his own subjective processes. Should we call this mere curiosity?
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> This "psychological" interest of the present time shows that man expects something from psychic life which he has not received from the outer world: something which our religions, doubtless, ought to contain, but no longer do contain—at least for modern man. The various forms of religion no longer appear to the modern man to come from within—to be expressions of his own psychic life; for him they

> are to be classed with the things of the outer world. He is vouchsafed no revelation of a spirit that is not of this world; but he tries on a number of religions and convictions as if they were Sunday attire, only to lay them aside again like worn-out clothes.

Today the air is filled with psychological and psycho-religious abstractions—an embarrassment of riches—but none of them capable of the same sort of demonstration that was supplied for the physical principles of the scientists. Applying leverage to ourselves is a much more delicate operation, and usually, when we try it, there is no immediate result. Testing is difficult and tedious. We don't quite know how to take hold of ourselves, and it may be that we prefer not to. The good life, we say to ourselves, ought to be more natural and spontaneous. Isn't life itself good?

Reflecting on these "normal" tendencies in all of us, Jacob Needleman has observed:

> We are so accustomed to believe that great truths need only to be put before us and they will have a beneficent effect. But I wonder if there is not something exceedingly naive in this assumption, some naive estimation of our unaided ability to be what we know, some failure to realize how swift and subtle is the passage from seeing the darkness to dreaming of light.

So it is that an increasing number of today's Candides—whether Zen iconoclasts of formulas or organic farmers behind the plough—tell us to get busy at what is there for us to do. Our lofty dream constructions, they say, will dissolve like the morning mist, and we'll all get very hungry. So, as Candide said, "we must cultivate our garden." But as we work at obligatory projects, there will still be the question: What about our *capacity* to dream? Has it no meaning? Why aren't those wonderful abstractions we develop about the mind, and the self, more potent in our lives?

We are unable to leave such questions unanswered, if only because the dreams go on and on, leading to all sorts of confusions. Ortega set the problem in terms that may be amenable for some. In a section on Thinking in *Concord and Liberty* (1946), he said:

> Lost in the profusion of ideas produced by himself, man feels uncertain what to do with them. He continues to believe that ideas serve some true need, but he does not quite know which. All he knows is that the service they may give is not what the last three centuries held it to be. *There is a strong feeling that reason will have to occupy a new position in the system of activities that constitute human life.* In short, from being the great solution the intellect has grown to be the great problem. That is why it behooves us to reflect on it, tackling the subject at its broadest and not confining it to one or another particular form of intellectual endeavor such as science or philosophy. These stand out as minute figures, belonging to a few centuries and a few regions of the planet, against a vast background of human intellectual occupation during a million years—the approximate age ascribed to our species by recent theories on glacial epochs. In this most comprehensive sense we ask ourselves: What is thinking?

There is no more difficult subject to inquire into, hardly different from inquiring into ourselves. We are thinkers. David Hume was the first to declare this difficulty. "For my part," he said, "when I enter most intimately into what I call *myself,* I always stumble on some particular perception or other: of heat or cold, or light or shade, love or hatred, pain or pleasure." He concluded:

> If anyone, upon serious and unprejudiced reflection, thinks he has a different notion of himself, I must confess I can reason no longer with him. . . . But I venture to affirm of the rest of mankind that they are nothing but a bundle of perceptions which succeed each other with an inconceivable rapidity, and which are in a perpetual flux and movement.

William James, who was determined to be scientific, thought in 1904 that the time had come to dispense with the term, if not the idea, of "consciousness." He said that consciousness was a name for the function of knowing, and that "thoughts" do the knowing. Thoughts, James held, are "real" things and a part of experience. But can a function say something about itself? Can it contemplate itself as independent of any act

of functioning? Obviously, the pursuit of self-knowledge starts out subject to great logical difficulty. This was pointed out by Herbert Spencer in his *First Principles:*

> The mental state in which self is known implies, like every other mental act, a perceiving subject and a perceived object. If then the object perceived is self, what is the subject that perceives? or if it is the true self which thinks, what other self can it be that is thought of? Clearly a true cognition of self implies a self in which the knowing and the known are one—in which subject and object are one; and this Mr. Mansel *rightly holds to be the annihilation of both!* So that the personality of which each is conscious, and of which the existence is to each a fact beyond all others most certain, is yet a thing which cannot truly be known at all; the knowledge of it is forbidden by the nature of thought.

Well, we refuse to submit to Spencer's logical conclusion. We cannot avoid defiance in this, since we *exist* and, as Descartes declared, we *think*—whichever way of putting it makes the stronger case. Those not bemused by the illusions of technique in thinking will bravely repeat the sage comment of Samuel Johnson in relation to a very similar problem: "All theory is against the freedom of the will, all experience for it."

Interestingly, a contemporary psychologist, Thomas Natsoulas (University of California, Davis), recently announced that the study of Consciousness has been seriously resumed, providing ample evidence in an article in the American *Psychologist* for October, 1978. After giving the historical reasons for its long neglect, he speaks of the "probable necessity to cognitive theory of an adequate conception of what consciousness is," and sets the stage for new investigation:

> Indeed, consciousness has again come under scientific scrutiny, with discussions of "the problem" now appearing at entirely respectable locations in psychology's literature. . . . Participating in this discussion feels like conforming to a trend that promises to return consciousness to psychological center stage. Signs of such a trend are becoming more and more frequent. . . .
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> What consciousness is (if it is not some thing), that deceptively simple question, which James addressed, needs to be addressed once again, but carefully and in a way that does not close off, by fiat, a good portion of the potential subject matter. . . . We should not quickly decide, for example, that consciousness is no more or less than James's function of knowing and proceed to study merely that. At this point in the *history* of scientific understanding, an effort at comprehensiveness seems called for.
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> Our question is a thoroughly theoretical one that demands the ultimate—what consciousness really is, once all that pertains to finding out is said and done. To answer it in a full and satisfactory way, without proviso, requires nothing less than an ideal explanatory framework, which of course is not at hand. Somewhere the story is told of Wolfgang Kohler's reply when he was asked for his definition of perception. He said, "If I could give you an answer, my life's work would be over." Kohler might have been speaking for generations of perception psychologists yet to come. In science, what perception, or consciousness, is cannot be stipulated; it must be found out, and finding out may be a very long process.

Mr. Natsoulas argues for basic common sense in this undertaking, as the ground on which all science must at first erect its structures, and he offers for consideration the seven accounts of the meaning of consciousness found in the *Oxford English Dictionary*. But a lag of interest in the ordinary reader is soon felt. How can an inquiry be made lively and engrossing for one who has no inclination to become a psychological specialist? Surely a matter of such universal import should not be restricted to a few professionals whose conclusions remain secret from all those disinclined, for good or poor reasons, to learn their language.

A question worth considering is how we might react if Köhler had been able to define perception (and consciousness) in a mighty effort which put an end to his life's work. It ought to be, let us say, something simple. Suppose he had said: Perception is an act of awareness of something by intelligence, leading to a response,

and the awareness may be named consciousness. (How circular can you get?)

What shall we do with this definition? Not much. It doesn't help us, it rings no bells. But it would doubtless have meant a great deal to Köhler. In *Meditations on Quixote* Ortega has a paragraph on philosophy which illustrates the problem of all such formulations: Unlike the definitions of physics, philosophic meaning remains almost entirely *implicit.* We have to ensoul the words of the philosopher's definition with the same rich content they have for him, and this requires us to have had his experience and to have performed his labors. The thing seems very close to impossible. As Ortega says:

> The ultimate ambition of philosophy would be to arrive at a single proposition which would express the whole truth. Thus the twelve hundred pages of Hegel's *Logik* are just the preparation which enables us to pronounce, in all the fullness of its meaning, this sentence: "The idea is the absolute." This sentence, so poor in appearance, has in reality a literally infinite meaning, and when one considers it as one should, the whole treasury of its significance bursts open suddenly and it illuminates for us at once the enormous perspective of the world. This supreme illumination I have called understanding. Particular formulas may prove to be erroneous, and even all those that have been tried may be wrong; but from their doctrinal ruins philosophy is reborn intact as an aspiration, as an urge.

The situation is very different from the quest for knowledge. In science, a proposed solution or hypothesis is referred to the specialists familiar with its terms. They test it. It is of course a finite—that is, solvable—problem or it would not be the business of science at all. Then they tell us what they find out. And so the body of scientific knowledge accumulates.

Statements about man—the subjective part of man, that loves, hopes, fears, thinks, and aspires—are the fruit and also lead to the erection of internal structures. These structures are made by humans in their own minds and cannot be passed upon by building inspectors. Their "truth-content" is in the code of abstract ideas or, sometimes, poetic utterances. What we understand of their expression depends upon the quality of our reception structures.

Ortega explains (in effect) why the abstractions of psychology and philosophy usually have so little impact:

> Culture presents us with objects already purified which once possessed a spontaneous and immediate life, and which now, thanks to our reflective process seem free from space and time, from corruption and caprice. They form, as it were, a zone of ideal and abstract life, floating above this personal existence of ours, always so uncertain and problematical. Individual life, the immediate, the circumstance, are different names for the same thing: those parts of life from which their inner spirit, their *logos,* has not yet been extracted. Since spirit and *logos* are nothing but "meaning," connectedness, and unity, all that is individual, immediate, and circumstantial appears to be accidental and meaningless.

That is why the abstractions do not seem to touch our lives. They are not alive, but extracts from life. We have not given them connections. Ortega continues:

> We ought to consider that social life as well as the other forms of culture are given to us in the form of individual life, of the immediate. What we today receive already decorated with sublime aureoles once had to contract and shrink in order to pass through a man's heart. All that is recognized today as truth, as perfect beauty, as highly valuable, was once born in the inner spirit of an individual, mixed with his whims and humors. We should not let our acquired culture become hieratic, as it will if we are more concerned with repeating than increasing it. . . . Acquired culture has value only as the instrument and weapon of new conquests. Therefore, in comparison with the immediate, with our spontaneous life, all that we have learned seems to be abstract, genetic, schematic. It not only seems so, it is.

The vital and the immediate element, the *logos,* has to be restored to the abstract ideas we encounter, or they will remain lifeless and uninteresting. We could call it putting ideas to work, applying or relating them to immediate existence.

This may help to explain why certain books on great philosophical questions are much more able to hold our attention than other works. The really good books always have a vital element of autobiography in them. The best part of Plato's *Phaedo* (on the death of Socrates) is the part which tells about the changes in his thinking, and the reasons he had for changing. The drama of the immediate is in such passages. They show how a man thinks, and we can savor the fruit because we participate (vicariously) in its ripening.

An abstraction, divorced from the wonderful moment when it took shape, has an air of finality. It is up there, apart from us and our lives—as Ortega says, pure and free from time and space. But *we* are not free from time and space, and our lives are notably impure. Such finality is only for those who have, as Köhler put it, completed their life's work.

So it may be with consciousness, with what we think of as our being or self. We are only on the way, far from having arrived. Our truths, then, need to apply to the *way*, not the end of the line. There must be an enormous difference between truth for on the way and truth in Nirvana. So, for us, as Cervantes said, the road is better than the inn.

This may be why science, as Gödel and some others have shown, always eventually breaks down and must be done again with new stipulations to begin with. It works for a time, and we are tremendously impressed, but its finality is illusory. Objective science can build bridges and planes and originate bombs, but it will not reveal meaning because meaning always has a timeless coefficient hidden somewhere in its make-up. This is the subjective—the *human*, if you will—element which closed systems cannot contain. Yet the road does go *somewhere*, and another sort of truth will somewhere prevail. Our feeling about this accounts for the inexhaustible drive which keeps us in pursuit of the wonderful abstractions that will really explain everything. And while they get us into endless trouble, they are apparently necessities of thinking life.

# *REVIEW*
## AN OLD-NEW THEME

WE began reviewing the novels of Nevil Shute here in 1952, and since then have given attention to nine of his books. We looked up some of these reviews after reading a story of his we'd missed—*Kindling*, which came out in 1938. We looked up what had been said about the other books because *Kindling* seemed somewhat dated—it is a morality play—and we wondered if his other books would give this impression. They did, but the more we read the less it seemed to matter. A theme that appears in his writing again and again is the contrast between public and private morality—as old as the story of Prometheus, and as new as saturation bombing.

Shute's point—often made these days by others is that if you are on the side of the Establishment you can do almost anything, regardless of the consequences, and may even be called a hero. (The President of the United States seemed to think that Lieutenant William Calley was a hero.) But if you have your own idea of right and wrong, and decide to live by it, you are likely to get into deep trouble. This happened to Prometheus. He couldn't stand to see human beings in their unenlightened condition, going about in a daze, so he stole fire—the fire of mind, some say—from Mt. Olympus, and gave humans the possibility of becoming gods. This exploit enraged Zeus, who had other plans for mankind, and he condemned Prometheus to a peculiarly painful imprisonment, described in detail by Eschylus in *Prometheus Bound.*

Zeus was the god in charge. He represented the Greek establishment, which would not be upset for long ages. Zeus would continue in power until the people stopped believing in him, as will the establishments of today. But occasionally some especially bright man hired by the establishment begins to feel that what Prometheus did made a kind of sense, and then the employee is haunted by the reminders of a tormented conscience. Sometimes he puts his conscience in the place of Establishment authority, and then another sort of trouble begins. (Daniel Ellsberg could serve as an example of this.) Or, instead, he may simply write down how he feels about what he has long been doing, as was the case with Freeman Dyson, an extraordinarily intelligent physicist who, during the war, was in charge of planning the British bombing expeditions over Germany. In *The Starship and the Canoe,* Kenneth Brower compares Freeman Dyson's life with the very different interests and activities of his son George, who lives in a big tree in British Columbia and likes to make canoes. Brower gives Freeman Dyson's reflections about his work during the war:

> Freeman came to know more about the bombing campaign than most operational officers. He knew more even than most cabinet ministers. His knowledge appalled him.
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> "The defenses made it impossible for us to bomb accurately. Burning down cities was all we could do, so we did that. Even in killing the civilian population, we were inefficient. The Germans had killed one person for every ton of bombs that they dropped on England. To kill a German, we dropped three tons. I felt my responsibility deeply, being in possession of all this information that was so carefully concealed from the British public. Many times, I decided I owed it to the public to run out into the streets and tell them what stupidities were being committed in their name. But I never had the moral courage to do it. I sat in my office until the end, carefully calculating how to murder another hundred thousand people most economically.
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> "After the war ended, I read reports of the trials of men who had been high up in the Eichmann organization. They had sat in their offices writing memoranda and calculating how to murder people efficiently, just like me. The main difference was that they were sent to jail or hanged as war criminals and I went free. . . .
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> "In August, 1945, I was all set to fly to Okinawa. We had defeated the Germans, but Mr. Churchill had still not had enough. He persuaded President Truman to let him join in the bombing of Japan with a fleet of three hundred bombers, which he called Tiger Force. We were to be based in Okinawa, and since the Japanese had almost no air

defenses, we were to bomb, like the Americans, in daylight. I found this new slaughter of defenseless Japanese even more sickening than the slaughter of well-defended Germans. Still I did not quit. By that time, I had been at war so long that I could hardly remember peace. No living poet had words to describe that emptiness of soul which allowed me to go on killing without hatred and without remorse. But Shakespeare understood it, and he gave Macbeth the words:

> *I am in blood*
> *Stepped in so far, that, should I wade no more,*
> *Returning were as tedious as go o'er.*

I was sitting at home eating a quiet breakfast with my mother when the morning paper arrived with the news of Hiroshima. I understood at once what it meant. 'Thank God for that,' I said. I knew that Tiger Force would not fly, and I would never have to kill anybody again."

What would Nevil Shute have done with such material? We don't have to wonder; he used it in *The Chequer Board,* a novel which came out in 1947. A British paratrooper is on trial for murder—in a quarrel over a girl—and the defense attorney is the man who had taught him commando methods of killing.

He stood in silence for a minute, staring at the foreman of the jury, marshalling his thoughts; in the court there was a long, tense pause. "I speak of what I know," he said quietly. "I have come here to defend this man for other reasons than because I want to take the fee marked on the brief. You have heard it stated in the evidence that I myself taught Douglas Theodore Brent to creep up in the darkness behind an unsuspecting man and stab him with a knife, and kill him. I taught him to do that in three different ways, so that whatever method of approach was forced on him by circumstances he could kill his man immediately and without noise. I taught him more than that. With other instructors I endeavored to serve that Douglas Theodore Brent, the man on trial before you, would act instinctively to choose the one of the three methods he was taught which would serve him best in the assault. We reasoned, we instructors, that in desperate circumstances he would have no time to think. He must know his craft so well, the knife must be so familiar in his hand, that he would act instinctively in what he had to do, without the least hesitation, without any thought. Members of the jury, those are the principles that I have endeavored to instill into the man before you.

He points out that Brent is now threatened with capital punishment for doing what he had learned so well to do during the war, without thinking. But what of the teachers of these "terrible crafts"? Should they be free from prosecution by reason of the Crown's cloak of immunity, while leaving "Corporal Brent unprotected to face a trial for murder, for doing what we have taught him to do by instinct and without thought?"

A dangerous doctrine, this. No wonder its acceptability is found mostly in novels, not in community practice.

In *Kindling,* the setting is very different. This is the story of an astute private banker. In middle life—he is still a vigorous man—his wife gives him ample reason for divorce, and bewildered by the emptiness of his existence and feeling poorly, he goes far out into the country, wearing old clothes, and walks for miles, trying to decide what to do with his life. Then an ill overtakes him suddenly and he wakes up in a small country hospital. The nurses mistake him for one of the transient unemployed, an illusion he encourages. Convalescing after an operation, he wanders around the desolate seacoast town. The time is the late 1930s and the depression has never lifted in Sharples. A girl who works in the hospital shows him around and answers his questions. What impresses him most is the kindness of everyone; the sympathetic advice.

The young woman tells him about the local shipyard, Barlow's, closing down.

"It was awful," she said soberly. "I've lived here all my life. My father was solicitor to Barlow's. It didn't really matter much to us, because he was thinking of retiring anyway. But first of all they had to lay off the men, and then some of the staff. And then the mine shut down, without any warning at all, and that threw over a thousand out of work at once. And there didn't seem to be any reason for it," she said. "It wasn't bad management, or anything like that so far as we could see. It just happened." . . .

He said, "Has nothing happened to the shipyard since then?"

She shook her head. "Nothing. They say now that it may never open again."

He was silent.

"We can't believe that here in Sharples," she said quietly. "Things always do come right, somehow or other, Don't they?"

He did not try to answer that.

But he tries to answer it with the rest of life. He sees a way to revive the shipyard, even though, after a six-year shutdown, the men will need months and years to regain efficiency at their jobs. He goes back to his bank and finances a Balkan country that wants some tankers, and Barlow's, now renamed, gets the order to build them. All through these operations the banker practices shenanigans—shady politics in the Balkans to get the order for the tankers, and specious claims in the prospectus offering stock to finance the revived shipbuilding yard. It all works out in the end, except that the banker goes to jail for promising stockholders immediate profits from the shipyard. He deliberately lied about expected dividends. He knew there couldn't be any, the first year. Eventually, the investors would have a return, but not then. So he lied to raise the money and the town of Sharples came back to life. The parallel with Prometheus is hard to miss. The banker lied, Prometheus stole, and both went to jail.

Well, this is more dangerous doctrine. Happily, no laws based upon it will work. Only in some splendidly anarchist utopia could it be applied. We should add, however, that Shute, being an amiable novelist, has the banker gain weight while in jail.

# *COMMENTARY*
## WHAT SHOULD WE EXPECT?

THINKING about schools—what is expected of them and what they are capable of—one may recall that Plato, whose whole career was devoted to the consideration of teaching, celebrated a man, not a school. Now and then a school is established for the ideal purposes Theodore Roszak describes in this week's "Children," but such schools seldom survive. Bronson Alcott, whose schools were intended to do precisely what Roszak speaks of—"The Child is the Book," Alcott insisted—was unable to continue. The parents and the community in general objected to what he was trying to do.

The *paideia* of the Greeks was not an organized educational institution but an *efforescence* of the attitude of the entire community, generated by its most distinguished men. As Werner Jaeger has said:

> It is a mark of the close connection between the productive artistic and intellectual life and the community that the greatest Greeks always felt they were its servants. This attitude is well known in the East also: it seems to be the most natural in a state where life is organized by quasi-religious rules. Yet the great men of Greece came forward not to utter the word of God, but to teach the people what they themselves knew, and to give shape to their ideals. Even when they spoke in the form of religious inspiration, they translated their inspiration into personal knowledge and personal form. But personal as it might be in shape and purpose, they felt it fully and compellingly social. The Greek trinity of poet, statesman, and sage embodied the nation's highest ideal of leadership. In that atmosphere of spiritual liberty, bound by deep knowledge (as if by a divine law) to the service of community, the Greek creative genius conceived and attained that lofty educational ideal which sets it far above the more superficial artistic and intellectual brilliance of our individualistic civilization. That is what lifts classical Greek literature out of the category of pure aesthetics, in which many have vainly tried to understand it, and gives it the immeasurable influence on human nature which it has exercised for thousands of years.

The modern university, as Hastings Rashdall pointed out long ago, is an inheritance of the Middle Ages, not of the Greeks. And as for our general education, Comenius was its architect, not Socrates. Comenius is indeed the "origin of evil" for modern education, since he believed that the excellence of humans corresponded exactly with the amount of instruction they had received from authoritative teachers. Robert McClintock has remarked:

> Here is the basis of our cult of the degree; and Comenius' faith in the power of the school had no bounds; he even suggested that had there been a better school in Paradise, Eve would not have made her sore mistake, for she "would have known that the serpent is unable to speak, and that there must be some deceit."

Schools are *social* institutions and they try to do what is generally expected of them. As McClintock puts it:

> As communities come to rely on schools to certify the competences of their people, they project onto those schools a productive mission to mold mechanically the populace; and students, who have increasingly seen schooling as a huge machine for stamping them with success or failure, have acquiesced, eagerly or hopelessly according to their prospects, and have been content to be taught. Consequently, the social uses to which an apparatus of instruction could be put reinforced the single-minded reliance on instruction within that apparatus. From this stemmed the following paradox: at no time in the West have there been greater resources for self-education available to all in the twentieth century, yet at no time has there been more extensive reliance on formal education for the education of all.

A great many schools see their duty and function as "transmitting the cultural heritage," and since creativity is not transferable, they transmit only the conventions of the cultural heritage—a process which creativity, where it exists, must learn simultaneously to resist and to use.

Can we say that schools will become better only as we expect less of them?

# CHILDREN
## . . . and Ourselves
### BEYOND TECHNIQUE

IN *Person/Planet* Theodore Roszak has a chapter on education and schooling. He gets into the subject by telling about his daughter, who studied ballet intensively, only to find that the ballet schools were indifferent to the qualities which led her to become a dancer. Roszak takes the ballet school as an archetype of educational institutions—that is, of what is wrong with them. The schools ignore what makes one child or youth different from the rest, focusing on the manageable aspect of the young—what they have in common. The ballet school, peculiarly tradition-bound, illustrates well this shortcoming of conventional institutions:

> There are special qualities in every dancer which the standard technique can serve, but never create or wholly anticipate. So she discovers, at last, that she does not wish simply to dance, but to be her own kind of dancer—indeed, a creator of dances, a choreographer. But she finds little tolerance for these special qualities in the academies, because her dance teachers are, after all, *teachers*—authorities and disciplinarians who cannot believe there is anything new under the sun, least of all anything new their *students* could ever teach them. The standard curriculum in ballet makes no provision whatever for improvisation, free expression, choreographic invention, let alone for open aesthetic discussion.
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> Yet, that is exactly the direction in which the education of the person must initially flow: from the pupil to the teacher. In every educational exchange, it is first of all the teacher who has something to learn. The teacher must approach asking, "Who is this child? What does he or she bring into the world? What have I to discover here that no one has ever known before?"

Is this asking too much of the teacher—any teacher? How, for example, will the teacher be able to recognize what "no one has ever known before"? One thinks of the struggle of the scientific innovator. The whole weight of tradition is against accepting what he has found out, and sometimes all the familiar processes of thinking about the matters affected by the new discovery have become doors locked against its meaning.

Then there is Ortega's account of the reception of the hero's originality, which goes against convention. People laugh at his visionary endeavors, and Ortega comments laconically: "It is a useful laughter: for each hero whom it hits, it crushes a hundred frauds." But Roszak is nonetheless right. One who teaches accepts a unique obligation—to be ready to see what is unique in another human being and to open a way for its expression or development—never to be indifferent or contemptuous because he has not encountered the quality in others.

But this underlying obligation—how many teachers are equal to it? So great a responsibility is possibly the explanation of Tolstoy's extreme declaration, which Roszak recalls:

> Tolstoi, one of the greatest of the libertarian teachers and among the first to organize an experimental free school (it was quartered on his country estate at Yasnaya Polyana and open to all the peasant children of the area) formulated the central question with absolute precision. *"Who has the right to educate?"* he asked. And his answer, "Nobody." Not the state, the church, the family.
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> "There are no rights of education. I do not acknowledge such, nor have they been acknowledged, nor will they ever be by the young generation under education. The right to educate is not vested in anybody."
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> Those who assume the right to educate, so Tolstoi argued, will educate in their own interest—at the expense of the child's autonomy. Hence, the coercion, the bribery, the authoritarianism of the systems created to enforce that presumed right.

Is Tolstoy right? Well, if he is right, and no one has the right to educate, should we close all the schools? Are the deschoolers vindicated?

Actually, Mr. Roszak has an illustrious predecessor in declaring that teachers must take their cues from the pupil. A hundred and fifty years ago, Bronson Alcott wrote in his notebook, "The Child is the Book." He meant that the child

must determine the curriculum, not the other way around.

A question obviously remains. No matter what the teacher sees or learns from the child, doesn't he still have to help him to learn what people call "the basics"—the three Rs? Well, we may decide that teachers or schools should teach these tools of communication and counting without fear of reproach, but certain hazards remain in any kind of organized education. As Roszak says:

> I think, for example, of Francisco Ferrer, the brave and brilliant Spanish educator who was executed for crimes against the state in 1909. In his struggle with an oppressive social order, Ferrer imposed a strict anticlericalism upon his influential Modern School movement. But he went on to identify the "exact sciences" as the heart of his curriculum, convinced that only they provide a "secure and unshakeable foundation" for the life of reason. Thus, he restricted his schools to that narrow range of intellectual powers from which, in Lewis Mumford's apt phrase, the "mad rationality" of our technocratic society takes its strength. So, too, the Progressive Education for which John Dewey campaigned. It is perhaps the richest formulation of libertarian pedagogy. But for all its democratic and socialist values, the philosophy never questioned the essential rightness and rationality of urban industrial society. Rather, it took industrialism as its framework and sought to civilize the system. As a consequence, Dewey's emphasis on popular competence and pragmatic experimentation easily flowed into a curriculum that has integrated the schools all the more tightly into the lethal orthodoxies of the modern world.

This seems a way of saying that the medium is indeed the message, no matter what the intentions and aspirations of the teacher. Even reformers will indoctrinate:

> The libertarian educators' image of human nature is still very much the Enlightenment conception of the free and rational citizen whose needs can be gratified by technological progress and whose anxieties can be stilled by science and sound logic. Even where the libertarians take the Marxist analysis of "false consciousness" and Freud's ideas about repression into their world view, they do not get much beyond the verbal-cerebral level of the personality. They both work from the assumption that we can *talk* our way to self-knowledge.

What then is the ideal teacher? If Tolstoy is right, and no one has a license to "educate"—and if Ortega is right, and the only real responsibility of the teacher is to arouse the hunger to know, never to transmit without question "the cultural heritage"—then the ideal teacher emerges as one who is determined above all to foster the joy of discovery in his pupils.

What then is the best besetting evil of modern education? It is the illusion of technique, as William Barrett has put it in the title of a recent book devoted to exposing its effects. Blind devotion to technique multiplies dogma in all directions.

Yet all practical knowledge is *embodied* in techniques. The ideal teacher, then, is one who knows how to *use* illusions—the techniques that are current in his time—to reach beyond technique. This is Mr. Roszak's essential point:

> I return to the ideal I raised when we discussed the possibility of an open childhood. A single word, an entire philosophy of education: Socrates speaking of himself as "midwife" to his students. *Mid wife*—one who brings forth what is already there, waiting to be born: the hidden splendors of self-knowledge. That is where a personalist education begins in this Socratic conviction that our first and highest object of study resides within. All there. Given. Teachers may offer information, know-how, technique, example. But until the student's innate calling declares itself, we have nothing but mimicry, memory work, superficial performance. It is only after we have tapped an authentic incentive that true education happens. Then, everything that lends depth and distinction unfolds before us—from the inside out.

# *FRONTIERS*

## What Price Transition?

THE Fall-Winter issue of the *New Alchemy Newsletter* begins with a complaint from a disgruntled member:

> I think it high time you evaluate your own worth. . . . I'm glad you are eating well but arty pamphlets, and your gift of Saturdays to passing environmentalists is not going to save much of anything. Are you really worth subsidy? . . . Unless the environmental movement can stand on its own feet economically, it will be laughed at by the stupidly materialistic world, hell-bent on self-destruction.

The New Alchemists were a bit upset by this communication—not by the challenge, but its mood. Yet the inquiry is not disdained. How much does it cost per pound to raise yellow bullheads and trout, fed on algae grown in solar-heated ponds? Some answers to such questions are given, but the general idea of the work of the New Alchemists deserves first consideration. On this, one of the founders, John Todd, says:

> My goal was to conceive ecologically inspired microfarms that made economic sense. I had in mind a farm for a couple or a family with access to a small piece of land and a minimal amount of water. The designs were by no means scaled-down commercial fish farms specializing in large-scale production of a single species. Instead they were diverse, for enough shared functions lie in diversity to give small-scale fish farms their economic strength. They are further characterized by a high degree of integration; solar and wind technologies are tied to architectural concepts that, in turn, can link ecological pathways and networks to marketable entities such as fishes, agricultural crops and the propagation of young trees. All of these cycles are interconnected and would help reduce the costs of such microfarms. . . .
>
> The solar-algae ponds are not just heaters; they are superb fish-raising entities. Their sun-warmed waters support dense algae blooms and a rich profusion of life much of which is edible for fish. . . . Wastes from the solar-algae ponds provide nutrients and warmed irrigation water for potentially high-priced off-season vegetables and flowers. . . . There are other ecological and economic linkages. Moist warm air within the solar structure lends itself to tree propagation. Mist-propagating technologies would facilitate the rooting of thousands of tree cuttings. Trees, especially fruits and nuts, are valuable and find ready markets in most urban areas.

This is the background of the fish-farming project at Woods Hole. The hope is that others will try out these pioneer models and go on with independent experiment and invention. As Bill McLarney, a co-founder, puts it: "The assumptions are that there is a vast reservoir of creativity and concern outside the 'scientific community' and that it is socially more valuable to involve people in solving their own problems than to hand them a solution."

John Todd gives the vision behind the work:

> I would like to conclude by framing the small, diverse, solar-based fish farm in the context of the present and the future. It has not yet dawned fully on us as a society that we are already in the early phases of a post-petroleum era. We still think and behave as we did in the 1950s. Oversized cars, foods transported from halfway round the world, centralized energy, and large multinational corporations may well become the hallmarks of the past.
>
> New forms still tentative are coming into being. Smallscale, decentralized, technological, flexible yet sophisticated energy, food, architectural and manufacturing networks are starting to emerge. Ecology, which is rapidly becoming a major design science, is allying itself with economics. It is my modest proposal that aquaculture could be a significant part of this.

Conn Nugent comments on the computation of costs:

> Let's say we've got our capital and operating instruments down pat, and let's say we're successful in determining the number of person-hours needed for "X" project. Standard practice would then make us assign an economic value to those person hours. And that's a tough nut.
>
> Example: John Barrister is a corporate lawyer. John has a solar greenhouse and he grows tomatoes. He built the greenhouse on weekends and tends it at night. Do we say that his labor costs are zero, since he's been using time normally spent in front of the TV? Do we say his labor costs $50 an hour, since zealous corporate lawyers work evenings and Saturdays? Or do we say the cost of his labor is

> actually a profit, since buildings and tending the greenhouse has kept him off the golf course? Or do we say that the cost of his labor is equal to the labor required to grow a comparable number of tomatoes in the Imperial Valley?
>
> And—here we go—can you measure the value of a juicy tomato versus a pulpy California blob? Can you calculate the benefit of gardening to John's longevity, his sense of wellbeing? And so forth. . . .
>
> It all gets back to the subtitle of Schumacher's famous book: *Economics as If People Mattered.* Economics is, or should be, an analytic tool for human values and ambitions, not some kind of iron dictator. As the man said, the confusion of quantity and quality is the great modern heresy.

When it comes to economic thinking, the New Alchemists are determined to put quantity in its place and keep it there, but not ignore it. In short, they are daring to plan and calculate for a sane society instead of the one we have.

This is essentially what Karl Polanyi declared for in his ought-to-be-famous essay published in *Commentary* for February, 1947—"Our Obsolete Market Mentality." He attributed the slavish insistence on *pricing* everything to habits of thinking formed by the industrial revolution. Adopting industrial-system economics as our philosophy of life has impoverished culture and distorted all social relations, he said. *"Man's economy is, as a rule, submerged in his social relations."* But market thinking submerged society in the economic system. *"Instead of the economic system being embedded in social relationships, these relationships were now embedded in the economic system."*

We are, as John Todd says, in the midst of a paradigm shift back to a society where human values are in control.