

## THE MEANING OF "PROGRESS"

FOR some fifty years, now, historians affected by the "moral neutrality" of science and also, perhaps, by the less than encouraging course of events around the world—have been speaking only of historical "change," leaving all claims of "progress" to the wishful thinking of romantics and the prejudices of chauvinists. Destiny was not a word of any meaning to such scholars, and "vision" could have no place in studies of behavior where all human motivation was reduced to sequences in the conditioning of causal chains. One inevitable result of this broad tendency in the practice of learning was the vulgarization of what little theory remained to give direction to practical affairs. When scholars reject the human world of moral motivation, that world continues on its way without them. Astrologers and crystal-gazers are quick to fill the vacuum left by these pseudo-Olympians, and mere journalists become the pundits to whom the common man looks for guidance. Culture is fragmented into elitist coteries, authentic intelligence is driven into hiding, and good men who try to stem the tide of social disintegration are sometimes martyred for their pains.

This, in general, is what occurs when men of ability and training abdicate their responsibility and isolate themselves in specialties remote from the needs and common longings of mankind. When the isolation is extreme, the remedy—if there is to be a remedy—is also extreme. And so, in the case of the one unmistakably great man of the twentieth century, Mohandas K. Gandhi, we have the example of total identification of the man with the common people. There are one or two others who have followed his example—Danilo Dolci in Italy, and Cesar Chavez on the West Coast of the United States.

There are, however, other factors to be considered in relation to the idea of progress. We

might even count ourselves fortunate in lacking scholarly endorsements of the dwarfed and degraded measures of progress that have survived from the nineteenth into the twentieth century. In our time progress is counted almost exclusively by advances in scientific invention and economic productivity. This is the age in which the worst anticipations of the paramilitary war college rule the foreign policies of nations, and when the "growth theory" of incessant technological innovation and compulsive consumption is the fanatical credo of the vast majority of businessmen.

How, after all, can there be any serious talk of *human* progress during an epoch which began at the end of World War II—ushered into birth, so to speak, by the atomic destruction of Hiroshima and Nagasaki—and which reached an ugly maturity with the Indo-Chinese war? Yet there may be value in recording what actually happened, economically speaking, during the period so heralded and marked. In a paper in *Resurgence* (July-August, 1971), E. F. Schumacher provides this summary and comment:

If you add together all of world industrial development since the beginning of mankind you would find that, if this development figure were halved, the half-way mark was reached shortly after World War II; according to the statistics, the next three years or so will see a greater increase in industrial output than has occurred in the twenty-five years following the war. During these 25 years the Industrial Way of Life has been pursued with a degree of fervour and devotion which older religions will envy. Growth economics has become the religion of the age. Economic growth, it is still thought, solves all problems. For instance, the problems of social justice: "Don't ask for a bigger share of the cake; promote growth, and everybody's slice will be bigger." The theory of planned Economic-Growth, like the theory of *laissez-faire* it displaced, relieves society of the awkward moral task of having to struggle with the problem of distributory justice.

Economic growth, it is thought, enables us to automate to such an extent that people will have to work only a few hours a week, and our main problem will be "education for leisure." This theory relieves society of the awkward moral and practical task of having to struggle with the problem of the humanisation of industrial work.

This is the age, therefore, when a comparatively small minority of the people of the earth have achieved the greatest wealth in history, so that they are able to boast that an earlier generation's luxuries have become their necessities, while at the same time their cities are now enormous, festering concentrations of infection and misery, with uglier and more degrading slums than are found in much poorer countries; and all this has been purchased, as Schumacher says, "by ravaging the earth and robbing it of its once-for-all endowment." It should be added that little feeling of enjoyment or pleasure is obtained from these excesses. The distractions of alcohol and drugs ought not to be called "problems" by this society, but recognized as desperate means of escape from the self-disgust and aimlessness that are felt by the beneficiaries of the mania for "growth."

There has been one other fruit of the drive for industrial progress—a growing dissent and rejection on the part of the young, which is now so widespread as to have become the subject of several rather impressive books—Theodore Roszak's *The Making of a Counter Culture*, Charles Reich's *The Greening of America*, and Jean-Francois Revel's *Without Marx or Jesus*. The chief characteristic of this resistance is revulsion rather than the invention of constructive alternatives, or so it must seem to the reader of newspapers and magazines; yet it should be remembered that the press is not noted for either awareness of or interest in subtle changes in human attitudes, and a change in mood on the part of so large a segment of the population is bound to find expression in many other ways. Young lawyers flock to Ralph Nader, offering their time, being willing to work almost for nothing in order

to be able to feel that what they are doing is worth doing. Other graduates of law schools are insisting that the firms they enter allow them at least 15 per cent of their time free for social services in behalf of defenseless and indigent people. A long article in the *Nation* for Sept. 13, by Timothy Ingram, "The Corporate Underground," reports on the program of protest carried on by competent employees of large corporations, who are publishing underground newspapers to inform other employees. These companies have headquarters in San Francisco. Mr. Ingram writes:

At Standard Oil of California, for example, an irreverent group produces *The Stranded Oiler*. At Pacific Telephone & Telegraph Co. there is the *AT&T Express*; at Metropolitan Life Insurance Co., the now defunct *Met Lifer*. Outraged by calloused acts committed in the company name, these in-house muckrakers are telling their colleagues the facts, and embarrassing a lot of people. . . .

The recent uproar over the slipping of secret war documents to *The New York Times* has again dramatized the conflict between group loyalty and individual conscience.

Undergrounders and whistle-blowers, feeling personal guilt by employment, are in a real sense turning state's evidence on their bosses. A sampling of the charges they raise and a look at the ostracism they suffer for their "unprofessional" candor and disloyalty to "the team," may give some insight into a more familiar character, the tongue holder, or shoulder shrugger; the fellow whose acquiescence allows corporations to pollute rivers, pass on unsafe goods, accept kickbacks, hustle frauds and conduct wars.

This is a long article and well worth the attention of readers who are looking for concrete evidence of a change in attitude on the part of people generally—who would like reason to believe that the occasionally promising rumors of a strong moral sense in the American people are not just talk.

One thing seems certain: this sort of conscientious stirring and action could not have happened thirty or forty years ago. The great corporations were certainly as guilty then as they

are now, perhaps more so, since there has been some small advance in the feelings of public responsibility on the part of such companies. What has changed is the awareness of people themselves. It comes out as "protest," since positive alternatives for men who are trained for particular jobs and work at them are very difficult to imagine; yet the change is there, and it manifests most openly in younger persons not yet weighed down by family responsibilities.

But before we claim such developments as evidence of progress, it might be well to attempt a distinction between genuine human development and what has been mistaken for progress during the past century. Tolstoy wrote categorically on this question:

The law of progress, or perfectibility, is written in the soul of each man, and is transferred to history only through error. As long as it remains personal, this law is fruitful and accessible to all; when it is transferred to history, it becomes an idle, empty prattle, leading to justification of every insipidity and to fatalism.

The importance of this observation can hardly be measured. A great deal of the human tendency to avoid individual responsibility emerges in this habit of transferring the law of progress from our personal lives to "history," or external marks of achievement. The institutionalization of religion is a prime example. Every unnecessary delegation of decisions to authorities and experts is a part of this tendency. The professionalization of the arts and of education, the dehumanization of work through the division of labor, the politicalization of government, the organization of welfare and good works—these are all substitutions of technique for the full and rounded development of individuals. It is a process which leads to bureaucratization of society and the atomization of persons, ending in centralized power, the manipulation of passive masses, and a vast range of fabricated emotional substitutes for the inner rewards of personal responsibility, achievement, and fulfillment.

Progress, then, if it exists, would consist in the reversal of all these tendencies. And behind that, perhaps hardly discernible, would be the dawning of feelings and ideas which would lead to the renewed assumption of responsibility by an increasing number of individuals, giving support to a long series of slow, "molecular" changes in daily life, until, finally, the resulting regeneration becomes a focus for social formations of a new sort, so that its energies begin to be felt as a force in history.

How can we tell when something like this is going on? Objective certainty in respect to such a change, especially at its formative stages, is hardly possible, but perhaps it is not required. There is no novelty, today, in the idea that a new historical epoch is now in the making, and men of widely differing background have given their reasons for predicting far-reaching transitions during the next twenty-five or fifty years. Change, however, can be thought of as proceeding at various levels. The sort of change which is fundamental—answering to Tolstoy's account of true progress—would have to begin with the most basic conceptions about man and the world. One thinker who has concerned himself with these questions, showing consistent insight and a broad grasp of human affairs, is Lancelot Law Whyte, the British scientist and philosopher who first came to prominence for American readers with publication of *The Next Development in Man* in 1948. Other books which illustrate the breadth of his approach are *The Unconscious Before Freud* and *Internal Factors in Evolution*. In an article in the *Saturday Review* for May 18, 1968, Mr. Whyte wrote what may be regarded as a special appeal to Americans. In this brief essay, titled "The End of the Age of Separatism," he said:

Looking ahead, I think the best term for the coming period is *global*. This means "associated with the totality of any system of entities," in contrast to *separatist*, which I define as "concerned only with the separate parts of a system taken one by one, neglecting its global features." (*Unitary* man, as I have described him elsewhere, uses global thought.) I assert that *the age of separatist conceptions is over*.

This is the most important thing that I have learned. If it is really true, there is a new hope for man; the time has come when he must turn over a new leaf. It means that from now onward separatist principles and methods will achieve nothing that matters. Separatist national policies will fail, and separatist scientific conceptions, such as variables representing the properties of single ultimate particles, will not lead to any basic advance.

This I offer, with awareness of its unusual character, as a philosophy for the millions. For the first time it is possible for the man in the street to know that, if he understands this simple point, he is ahead of the politicians and the physicists, at least insofar as they are both still trying to use separatist methods. May I be proved right, for the sake of mankind, and may the switch to global methods of thinking take place soon.

One may doubt that Mr. Whyte thinks of "instructing" the man in the street in this verity; rather, he offers articulate confirmation, based upon a variety of disciplines, of what may turn out to be the profoundest intuition of the age: that there is no longer any point in attempting a life and a well-being in isolation and disregard of the welfare of others. This is a conception of the role and meaning of humans which overtook Mr. Whyte at the age of twenty-nine, with the impact of a peak experience. As he puts it:

It was a transformation of the person from separatist confusion to a new global coordination, leading toward a novel kind of intellectual clarity. It happened without my will, taking me completely by surprise. My ego has no reason to take any pride in it. It was a gift from the gods, guided by the regenerative capacity of organisms, operating in this case at the esthetic center of the person.

This conviction became Mr. Whyte's vocation, informing all his work. When writing this *SR* article, he felt a special urgency to speak of it in terms of the future:

We are now, from 1960-80, at the watershed which marks the brief overlap of the past separatist period and the global period ahead. At the moment there is relative confusion and all that is visible to most is an old civilization destroying itself; a moment later a future-oriented community is seen at work creating a new one. . . .

When not pathological, man and woman cannot help ceaselessly forming unions or contracts, in love and creating families, communities, ideas, and ideals. But the human situation today is unprecedented and has this unique characteristic: No man can be himself, a potential member of the human community now in formation, unless he consciously and deliberately orients his life in some degree to this supreme need of the race at this time: human unity. No sense of vocation is adequate today which does not include the task of assisting in some degree, great or small, the creation of a global human community.

Mr. Whyte is convinced that the time has come for conscious and deliberate recognition of this goal. He is not concerned with the formation of an organization to work toward this end, but regards the potency of ideas as of far greater importance. He writes at some length concerning the process of awakening to the imminence of change:

Many persons have reached the conclusion that a major change in human awareness and behavior is now taking place. In one respect this is beyond challenge. Unprecedented advances in science are forcing uniquely rapid changes in the life of the individual and of society. Parallel with this there is the now unmistakable—though already long continuing—collapse of values, and the sense of the instability, uncertainty, and absurdity of many human habits. This was foreseen in the nineteenth century; I experienced it around 1916-18. This is the retrospective and more conscious aspect.

On the other hand, there is a future-oriented process, operating at a less conscious level. This is the now rapidly spreading—though in many individuals still largely unconscious and in some entirely absent—movement of minds toward a conviction that the time has come for a new start. This shift of, attention, from detached contemplation of confusions inherited from the past to a vital acceptance of the task of creating a different future, is most evident in the contrast of the older generation now around sixty to seventy with the young of twenty to thirty, though it is age in spirit and not in years that determines this difference.

To speak of a life which takes into consideration the welfare of the whole may seem a very simple thing—too simple, perhaps, to become the foundation principle of growth for

human society—yet this simplicity, or superficiality, which is what simplicity must mean, used in this way, is characteristic only of the verbal forms involved. The meaning behind Mr. Whyte's conception is concerned with an altered sense of *self*, so that all those undertakings which relate only to personal or partisan satisfaction are felt to be tasteless in substance and insipid in effect. Narrow self-interest belongs only to the extreme egocentric phase of human consciousness and cannot survive the present epoch. So, naturally enough, the motive of merely profit-taking, like the anxious longing for elaborate material security which goes with it, seems infantile to those whose feelings of awareness go beyond the old peripheries of separatist identity.

How could a "progress" of this sort be measured? It probably cannot be measured, although there may be intimations that it is going on. Rejection of war and of the extremes of indifference to the welfare of others, such as capital punishment, might be taken as signs. The unresponsiveness of the best of an entire generation to the blandishments of acquisition has a similar significance. Concern for the earth as a living entity, and for all living things upon it, arising almost spontaneously in various parts of the world, suggests the emergence of a larger idea of self, a feeling of the pantheistic brotherhood of life.

But concern for measuring progress is seldom found among those who are actually capable of it. The growth that Tolstoy spoke of, at any rate, does not move men to count their achievements or to speak of how they have "advanced." You find such people speaking of themselves less and less. The very realizations they attain erase the egotism of ambition and the pride of place. The finer the human development, less pretentious the language, the more indifferent the people to their excellences save as tools.

It is only in a time of ignorance, false ideals, and widespread popular misapprehensions that the honorifics of human longing have to be used as

symbolic reference-points for the soul's awakening to its own potentialities. Hence the paradoxes of Lao-tse, who spoke of the virtue beyond the virtues which are verbalized by men, the reality which can never be named.

The man who seeks wisdom is forever asking and talking about it, requesting definitions, mourning its absence from the world and imagining how things will be when men become wise. But he will never become wise so long as he reaches after formal identifications of wisdom. And should he gain some degree of insight, he will stop using the language of longing, save on those occasions when he speaks to those who are still captive to his own former condition, hiding with the texture of their futile hopes the avenues to understanding.

It is too much to say that the world, in its present struggle to release itself from "separatist" thinking, is slowly moving toward knowledge and wisdom. This would be a psychological extravagance which we cannot afford. But it seems at least possible that, in years to come, we may be able to forge an understanding of the difference between wisdom and pretensions to it, and learn to agree somewhat upon the stance that must be adopted before wisdom can be found. We shall then find reason to be very grateful to those few men who have generated in themselves certain basic clues or intimations concerning what must be done, and, in the worst of times, have found ways to make themselves heard.

## *REVIEW*

### "ALIENATION AND ECONOMICS"

AT the level of diagnosis and theory, Walter A. Weisskopf, professor of economics at Roosevelt College, Chicago, is very much in tune with E. F. Schumacher, so often referred to in these pages. Dr. Weisskopf has also been a contributor to MANAS, and his new book, *Alienation and Economics* (Dutton, \$7.95), should be of particular interest to readers who want to obtain a clear understanding of the intellectual and moral weaknesses in the thinking which underlies the prevailing economic doctrines of the present. The book, as the author explains, is a philosophic critique of these doctrines. It shows an obvious command of the history of economic theory and undertakes a thorough review of the course of economic thinking, from Adam Smith on, using psychological tools of analysis. Early in the volume, Dr. Weisskopf says:

What was thought to be the greatest strength of Western civilization, science, technology and economic progress, turned out to be Pandora's boxes that threaten this society with destruction. Science helped create nuclear weapons which may for the first time in known history threaten mankind with extinction. The armaments race and increasing sophistication in nuclear, chemical and biological weaponry have moved the unthinkable very close, not only to the thinkable but to the probable. Medicine, which until recently was considered to be almost wholly beneficial, has helped along the population explosion and raised the specter of overcrowding and mass starvation. Technological and economic progress in combination with urbanization has created the ghettos, traffic congestion, air, water and soil pollution, and disturbed the ecological balances of the natural habitat and of the environment in general. Economic progress did not provide any solution for the problem of poverty, hunger, malnutrition and this not only in the poor countries but even within the fantastically affluent United States. The main institutions of Western society, science, technology and the economy have at least created as many ills as they have remedied.

This experience is tied in with the failure of democratic institutions to carry out even those reforms that seem possible within the existing system.

The many measures to improve conditions for the poor, the segregated, the disadvantaged, to integrate the races and achieve equal civil rights seem to have ground to a halt long before their goal was reached. A society mainly motivated by financial self-interest has great difficulty in carrying out altruistic measures, funds destined for the poor and disadvantaged seem to stick too easily to the fingers of those who are supposed to administer such funds. In addition, democracy, with its majority rule, seems unable to render effective help to minorities, and one of the main new facts of this society is that the poor and disadvantaged are, in contrast to all previous societies, a minority.

The meaning of all this failure is the subject-matter of Dr. Weisskopf's book. Why did our extraordinary energies and even more extraordinary know-how produce only these frustrating results? The answer, the author believes, lies in the way we think about ourselves and the world. "Important dimensions of human existence," he maintains, have been suppressed by this way of thinking. In consequence, we have misread both the laws of external nature and the laws of human nature. We have not only oversimplified but vulgarized human ends and aspirations, and we have attempted to found a "science of society" on the gross consequences of this simplification. Economics, Dr. Weisskopf contends, has pursued its own theoretical development in bland neglect of the realities of the human situation. It sought a Newtonian exactitude in matters where multi-dimensional forces, not all of them known, play an important part.

Economics, this writer suggests, must learn to accept its first principles from the realities of man's nature. It is not an "independent" science, but a discipline which exists to serve man's well-being. That well-being depends upon a wise and humanly constructive use of the time and energy at our disposal during a brief lifetime. This is the only important "scarcity," and the man who gives too much of his time and energy to the accumulation of material goods, and who thinks this is "progress" because he has been taught to believe it, is really wasting and distorting his life.

A humanistic economics would be subject to severe limiting definitions of this sort.

One by one Dr. Weisskopf examines critically the fundamental dogmas of classical economics:

In a society with a secularized, nonreligious belief system based on empiricism, naturalism and rationalism, only nature interpreted by "science" can morally justify action and behavior. By calling something a natural propensity and an innate inclination such justification is implied. Although the acquisition of more and more, the goal of economic growth becomes meaningless in an affluent society, in early capitalism this ideal was not meaningless because of the situation of relative scarcity of means of production and a population rising in both numbers and expectations. However, Adam Smith and the classical school of economics certainly erred in interpreting the acquisitive attitude as a natural human inclination. Such an interpretation represents the elevation of a culture-bound historical orientation to a universal principle. It is even doubtful whether there is an innate drive toward "bettering one's situation." But even if this were granted for the sake of argument, one has to admit that what human beings consider as "bettering themselves" could be radically different from the acquisitive attitude. It may be freedom *from* the work discipline, the possibility to loaf, to have leisure, to contemplate, to do nothing, combined with a target income which would ensure the necessities of life and not more and more so-called comforts, frills, and consumption "kicks."

From this assumption of classical economics, Adam Smith passed to his famous claim that, with all men seeking their own gain, each one is "led by an invisible hand" to promote the common good, "which was no part of his intention." This, as Weisskopf says, raised a historically relative situation "to an absolute principle in order to justify its goals." The course of development of economic theory eliminated the foundation of moral principles, one by one, until what remained was a pseudo-species of "pure science," value-free or value-empty, with no more concern for human good or human intentions or longings than the laws of physics or chemistry. The idea of happiness or good was vulgarized by the utilitarians to the point where it becomes possible

"to justify the oppression, repression, exploitation of, and discrimination against minority groups because this may maximize the pleasure and satisfaction of the majority." Independent principles of good and evil and right and wrong are no longer thought to exist, and the quality of any action, public or private, is measured wholly in terms of its effect, whether actual or anticipated. We see that this is a purely technical way of reaching decisions, in which values are wholly relative or merely statistical. Dr. Weisskopf comments:

There is a certain hypocrisy in our condemning the Nazi atrocities of an Eichmann and pretending that his value-relativism is foreign to the rest of industrial and democratic society. After all, a concentration camp differs from a factory only by the degree of "goodness" or "badness" of its ultimate goal. The efficient production of thermonuclear weapons, of nerve gases and materials of biological warfare can be compared to a concentration camp; the similarity in these situations is that the goal can be considered as morally reprehensible whereas the pursuit is carried out with the utmost efficiency and rationality. This antinomy between "bad, irrational" ends and "good, rational" efficient means is a characteristic of industrial capitalism. It could be said that this society has turned the slogan that the ends justify the means, to read that (rational) means justify (bad and irrational) ends. Everything that science and technology make possible, that is everything that can be accomplished with what passes for rationality and efficiency in modern society, is permitted, indeed it is justified; because it can be done efficiently and profitably, it is assumed that it should be done, regardless of its negative moral implications.

In the long term, thinking in this way leads to habitual neglect of moral responsibility. Everything becomes a matter of technique. It is the delusion of Faust, reduced to the level of a TV commercial, as banal as the speech of the streets and noticeable in its effects only in the social explosions of riots, bombings and burnings. Weisskopf's analysis is searching:

We have become accustomed to assume that all problems can be solved by mechanical, organizational, manipulative means, in order to

escape the moral dilemma. . . . The inner moral conflicts are externalized, projected into the outside world and become group interests. The inner conflict within each and every individual is avoided and becomes an external conflict of interests. Is it surprising, then, that the common good is transformed into the private interests of holders of political power? The consequence is corruption: they often sacrifice the public interest to their private interests because of bribery, the hope for jobs in industry and so forth. The distinction between public and private interests is obliterated.

A critique of modern economic theory covers a great deal of ground mainly because economic thinking has become virtually the religion of the advanced technological societies. Dr. Weisskopf shows how it enters into every phase of social life, and how the slogans of the free enterprise system have been allowed to inhibit and suppress normal human intelligence and moral awareness. The "democratic" principle is used against critics of production and consumption patterns—if the people buy it, we must make it, since the consumer is sovereign, and rightly so!—which "leaves the field to the advertisers and serves to silence any doubts about the validity of the status quo."

*Alienation and Economics* is a plea for change in direction of our economic thinking. It calls for better understanding of the nature of man, recognition of the dependence of a harmonious social order on a conception of human life which gives scope to the deep, non-material resources of human beings, which are now largely repressed and alienated.



## *COMMENTARY*

### PATTERNS OF REFORM

AT the end of a long life, Gandhi wrote regretfully of how much of his energies had gone into resistance to tyrannical power, instead of being devoted to constructive work. He spoke of this disproportion as his "Himalayan blunder," yet it seems fair to point out that it was not really *his* blunder. Both the times and his associates obliged him to struggle against oppressive political forces. He had little faith in political power. His relations with it came almost entirely from his effort to make people free of external political control. This brought him into contact with the politically powerful, and people sometimes concluded that Gandhi was a "sagacious politician." Gandhi was indeed sagacious, but his political activity was never from choice, and once India was free he divorced himself from politics, turning to those reconstructive activities which had always been his primary interest.

Other men who are devoted to basic human welfare find themselves confronted by the same unhappy need to divide their energies. Dolci, in Sicily, wanted only to restore the self-reliance and self-respect of the Sicilian peasants, but found himself in conflict with the Italian bureaucracy. He could not just "help the people," but had to work to remove the oppressive conditions which made helping them impossible.

So with others. E. F. Schumacher, having recognized the practical economic needs of the underdeveloped countries, could not limit his labors to serving those needs. Too many wrong things were being done in the name of economic aid, so that he was forced to give a great deal of his time to pointing out the fallacies and contradictions in conventional economic theory. The same might be said of Ivan Illich, who found it necessary to become an iconoclast, although his basic interest is undoubtedly in teaching.

Perhaps it will be said that this is an old pattern, that before there can be positive

reconstruction the errors of the past must be cleared away, often through revolution. There is obvious truth in this claim, yet the pattern may be changing with the reformers of the twentieth century. Almost without exception, the effective reformers of our time are not advocates of violence or violent change. Nor are they advocates of "total revolution," but only of change in order to *make room* for specific forms of constructive activity—as illustrated, for example, by the last paragraph on page 8.

# CHILDREN

## . . . and Ourselves

### THE FOUR "NETWORKS"

APPROPRIATELY, the longest chapter in Ivan Illich's book, *Deschooling Society* (Harper & Row, \$5.95), is devoted to his positive proposals for alternatives to conventional schools. Now having a review copy of this volume, and having discovered that we have in effect "reviewed" most of the material in it in the form of CIDOC papers, we shall concentrate here on these proposals. The assumption which underlies them is that "we can depend on self-motivated learning instead of employing teachers to bribe or compel the student to find the time and the will to learn." The initial account of the alternatives is as follows:

I believe that no more than four—possibly even three—distinct "channels" or learning exchanges could contain all the resources needed for real learning. The child grows up in a world of things, surrounded by people who serve as models for skills and values. He finds peers who challenge him to argue, to compete, to cooperate, and to understand; and if the child is lucky, he is exposed to confrontation or criticism by an experienced elder who really cares. Things, models, peers, and elders are four resources each of which requires a different type of arrangement to ensure that everybody has ample access to it.

It is evident that Illich believes young people are quite capable of finding their own way among these channels, with the help of others who are ready to offer guidance concerning how to locate the sources of what they want to know, instead of telling them what they *ought* to know. First, then, his program involves the restoration of individual responsibility for learning and education. Compulsion, you could say, is needed only for pupils who have been made apathetic and unresponsive by compulsion. The vicious circle must be broken. The rhythm of the individual's concerns and interests and awakenings will rule the learning process, not the assumptions of curriculum supervisors. Education, then, will begin when it is *wanted*. Since that is when it

really begins under any circumstances, it seems sensible for such institutional arrangements as are necessary to take this law into account and to cooperate with it. These are the four networks which Illich proposes:

Educational resources are usually labeled according to educators' curricular goals. I propose to do the contrary, to label four different approaches which enable the student to gain access to any educational resource which may help him to define and achieve his own goals:

1. Reference Services to Educational Objects—which facilitate access to things or processes used for formal learning. Some of these things can be reserved for this purpose, stored in libraries, rental agencies, laboratories, and showrooms like museums and theaters; others can be in daily use in factories, airports, or on farms, but made available to student as apprentices or on off hours.

2. Skill Exchanges—which permit persons to list their skills, the conditions under which they are willing to serve as models for others who want to learn these skills, and the addresses at which they can be reached.

3. Peer-Matching—a communications network which permits persons to describe the learning activity in which they wish to engage, in the hope of finding a partner for the inquiry.

4. Reference Services to Educators-at-Large—who can be listed in a directory giving the addresses and self-descriptions of professionals, paraprofessionals, and free-lancers, along with conditions of access to their services. Such educators, as we will see, could be chosen by polling or consulting their former clients.

This is of course only the bare bones of the proposals, and in this chapter of thirty-three pages there is a long section of discussion of each of the networks. The chapter needs to be read in full to grasp the far-reaching implications of this sort of "revolution" in education. Involved is a change in human attitudes toward the young and toward growth that would mean founding a golden age in the midst of a very dark period of history.

Also involved in the educational aspect of "things" is the fact that a great many manufactured articles are needlessly complicated to suit the

mysterious ways of manufacturers and their plans of obsolescence. Such obscurantism in technology operates as an anti-educational force, and what is anti-educational is anti-human. Illich, moreover, says:

In a world which is controlled and owned by nations and corporations, only limited access to educational objects will ever be possible. But increased access to those objects which can be shared for educational purposes may enlighten us enough to help us to break through these ultimate political barriers. Public schools transfer control over the educational uses of objects from private to professional hands. The institutional inversion of schools could empower the individual to reclaim the right to use them for education. A truly public kind of ownership might begin to emerge if private or corporate control over the educational aspect of "things" were brought to the vanishing point.

The section on skill exchanges is filled with common sense. Illich points out that an intelligent person usually needs only someone who has the skill in order to learn it from him. In the context of schooling, skills are taught only in "official" circumstances, surrounded by meaningless prerequisites which run the cost of gaining the skill up very high. As Illich says:

The public is indoctrinated to believe that skills are valuable and reliable only if they are the result of formal schooling. The job market depends on making skills scarce and keeping them scarce, either by proscribing their unauthorized use and transmission or by making things which can be operated and repaired only by those who have access to tools or information which are kept scarce.

Schools thus produce shortages of skilled persons. A good example is the diminishing number of nurses in the United States, owing to the rapid increase of four-year B.S. programs in nursing. Women from poorer families, who would formerly have enrolled in a two- or three-year program, now stay out of the nursing profession altogether.

Insisting on the certification of teachers is another way of keeping skills scarce. If nurses were encouraged to train nurses, and if nurses were employed on the basis of their proven skill at giving injections, filling out charts, and giving medicine, there would soon be no lack of trained nurses.

The more you read of this chapter the more apparent it becomes that Illich is really trying to make it possible for everyone to be an autodidact—to become, that is, wholly responsible for his own education. Nowadays an autodidact is a very rare bird—someone who has taught himself and has not learned in conventional ways at all. Imagine, if you can, a society made up of people who are mostly autodidacts! It would be overflowing with originality, independence, and resourcefulness. *That* is what Illich is after, and his alternate program of education is a completely rational means of getting it. How would the program work?

The establishment and operation of educational networks would require some designers and administrators but not in the numbers or of the type required by the administration of schools. Student discipline, public relations, hiring, supervising, and firing teachers would have neither place nor counterpart in the networks I have been describing. . . . Today's educational administrators are concerned with controlling teachers and students to the satisfaction of others—trustees, legislators, and corporate executives. Network builders and administrators would have to demonstrate genius at keeping themselves, and others, out of people's way, at facilitating encounters among students, skill models, educational leaders and educational objects. Many persons now attracted to teaching are profoundly authoritarian and would not be able to assume this task: building educational exchanges would mean making it easy for people—especially the young—to pursue goals which might contradict the ideals of the traffic manager who makes the pursuit possible.

If the networks I have described could emerge, the educational path of each student would be his own to follow, and only in retrospect would it take on the features of a recognizable program. The wise student would periodically seek professional advice: assistance to set a new goal, insight into difficulties encountered, choice between possible methods. Even now, most persons would admit that the important services their teachers have rendered them are such advice and counsel, given at a chance meeting or in a tutorial. Pedagogues, in an unschooled world, would also come into their own, and be able to do what frustrated teachers pretend to pursue today.

The following is one of the most important of Illich's comments:

To rely for true intellectual leadership on the desire of gifted people to provide it is obviously necessary even in our society, but it could not be made into a policy now. We must first construct a society in which personal acts themselves reacquire a higher value than that of making things and manipulating people. In such a society exploratory, inventive, creative teaching would logically be counted among the most desirable forms of leisurely "unemployment." But we do not have to wait until the advent of utopia. Even now one of the most important consequences of deschooling and the establishment of peer-matching facilities would be the initiative which "masters" could take to assemble congenial disciplines. It would also, as we have seen, provide ample opportunity for potential disciples to share information or to select a master.

## FRONTIERS

### Where Reform Should Begin

BROWSING in the *Saturday Review* recently, we found Cleveland Amory's report of his talk with Thor Heyerdahl about the Norwegian archaeologist-adventurer's recent voyage across the Atlantic in the *Ra II*, a ship constructed of papyrus reeds. (*SR*, Oct. 9.) Heyerdahl had noticed (as he explains in his book, *The Ra Expeditions*) that paintings on ceramic pots, the work of ancient pyramid builders in northern Peru, showed reed boats similar to the reed boats pictured in the wall paintings of the tombs of the Egyptian Pharaohs. The same sort of boats are to be seen in wall paintings in an old village on Easter Island, where the aborigines called the sun *ra*, as did many Polynesian peoples as well as the ancient Egyptians. So, Heyerdahl built a fifty-foot papyrus boat and, after it foundered built another, finally sailing as far as the Barbados in the West Indies, in order to prove that the Egyptians could have reached the Americas and brought their arts and sciences.

Mr. Amory, however, does not report on this interesting possibility, but tells about a new concern that has overtaken the Norwegian paper-boat navigator:

I saw pollution [Heyerdahl told the *SR* writer], *all the way across*. Do you realize what that means? The entire ocean is getting polluted. We saw refuse from one end of the ocean to the other. On *Ra II*, out of fifty-seven days, we saw oil lumps on forty-three of them.

The main problem is not to think or arm or prepare for another human enemy that may or may not be there. We ought to prepare for a common, silent enemy that is already there. It's very unrealistic to have a War Department just thinking of the first thing. I used to think of the bomb as mankind's major enemy. It's there, all right, and it may or may not destroy us. But the real enemy is the pollution that we know is there and that will certainly destroy us unless we can start a full-scale war on it right now.

In his recent book, *Who Owns America?*, Walter J. Hickel, former Secretary of the Interior, puts his finger on the main problem:

There are very few purely private decisions any more. Increasingly, every private decision related to our society must also be considered a *public* decision, one that cannot be undertaken without regard for its effect upon other individuals. . . .

What can we do about private decisions that are destructive? We can alert people, educate them, and inspire them. There is no substitute for the motivation provided by millions of people. That power, when people are informed and committed to a great cause, can do what billions of federal dollars cannot begin to do. . . . Environmental responsibility is a way of life, an attitude toward our habitat, an ever-present awareness of the interrelationship and interdependence of all living things on this earth.

One could say that Mr. Hickel has got as far as a precise definition of what needs to happen. But we know of very, very few persons who have practical ideas on what must be done to *make* it happen. Involved are what William James called changes at the *molecular* level, and what John Todd has spoken of as the "microcosms" of man/land relationships. In *The Unforeseen Wilderness*, Wendell Berry made the same point in language which should be dear to all. Speaking of the role of conservation organizations, which is, we might say, to "alert people, educate and inspire them," he wrote:

If they are to succeed in any way that is meaningful, or perhaps if they are to succeed at all, their work must be augmented by an effort to rebuild the life of our society in terms of a decent spiritual and economic connection to the land. That can't be done by organization, but only by individuals and by families and by small informal groups. It will have to be done by leaving the cities and the suburbs and making a bond with some place, and by *living* there—doing the work the place requires, repairing the damage other men have done to it, preserving its woods, building back its fertility and its ecological health—undertaking, that is, the labor, the necessary difficulty and clumsiness of discovering, at this late date and in the most taxing of circumstances, a form of life that is not destructive.

The limitation of political action is that it cannot, does not know how to, enter into an effort of this sort. And the movements spurred by conservation organizations, however valuable and necessary, are of a similar character. As Berry puts it: "The conservation organizations are motivated by principles which very largely remain abstract, since the number of people who can know a place is necessarily too small to protect it, and must therefore enlist the aid of people who do not know it but are willing to protect it on principle."

These are the elementary considerations in the general regeneration of human attitudes that everyone agrees is necessary to accomplish what everyone also agrees must be done. The obligation of the powerful in government and industry is not to "arrange" this sort of migration, since human needs at the microcosmic or molecular level are too individual, too involved in idiosyncrasy and particular interests to be served from above. The real need, as always, in an epoch of genuine revolutionary potentialities, is for the *removal of obstacles* to the free and independent development of human beings. Obstacles to a return to the land, in law and custom, should be removed. Mr. Hickel shows that this is quite possible:

Our population is growing, and our urban centers especially give the impression that we are rapidly running out of space. In reality, there are still great regions of private and public land available both for living and for the restoration of man's spirit through recreation. Anyone who crosses the country can readily see that the immediate problem is one of distribution—not only of goods but of people. Our greatest lack has not been one of space but rather of imagination in caring and planning for all our property and all our people. Is it right to give a cow one hundred acres of public land on which to roam, while a ghetto family is penned up in one hundred square feet?

It is as Mr. Hickel implies. Our greatest need is for people with imagination. And if it is the job of the conservation organizations to inspire, the spread of books like *The Unforeseen Wilderness*

would be a fine way to stir the human spirit to wonder and individual discovery in relation to the natural environment, not merely because "pollution" is now the common enemy, but because this makes a good human life.